

LLNL Livermore Site Fourth Quarter 2009 Self-Monitoring Report

The following is the fourth quarter 2009 self-monitoring data for the treatment facilities and Lake Haussmann at the Lawrence Livermore National Laboratory (LLNL) Livermore Site.

As defined in the March 2009 Consensus Statement, all thirty-two milestones were met, including the four Fiscal Year 2010 treatment facilities restarts. A total of twenty-three facilities were restarted and thirty-three treatment facilities are currently operational. TFA West was shutdown in January 2008 after a year-long treatability test and remains operational only during monthly sampling events.

The volumes of ground water and soil vapor treated and volatile organic compound (VOC) mass removed during the fourth quarter of 2009 are presented in Tables 1 and 2, respectively. An historical summary of VOC volume and mass removed are presented in Tables 3 and 4, respectively.

Attachment A presents ground water treatment facility and extraction well (ground water and soil vapor) VOC, chromium, bioassay, turbidity and chloride analyses (Tables A-1 through A-5). During the fourth quarter of 2009, all effluent sample analyses were within acceptable discharge limits with the exception of the MTU1 effluent sample collected on December 3, 2009. The reported result for this sample was 0.11 mg/L of total chromium (LLNL uses total chromium analytical results as a surrogate for hexavalent chromium during the wet season). However, this result is outside the historical range of chromium detected at this location, and well exceeds the most recent influent sample result of 0.045 mg/L of chromium. Therefore, LLNL suspects the validity of this reported result.

Self-monitoring reports for all treatment facilities are presented in Attachment B. Monthly volumes of ground water extracted are shown in Attachment B; however, instantaneous flow rates are not shown for wells that are now only used for sampling and are not continuously pumped. The monthly volume shown for these wells is the quantity of water evacuated for sampling purposes. Monitoring data for Lake Haussmann are presented in Attachment C.

A well location map showing newly installed wells and treatment facilities, and ground water elevation contour maps showing hydraulic capture zones for hydrostratigraphic units (HSUs) 1B, 2, 3A, 3B, 4, and 5, are presented in Attachment D. The contour maps for the individual HSUs are based on data mostly collected during October 2009.

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Table 1. Volumes of ground water and soil vapor extracted and treated at the Livermore Site, October through December 2009.

Treatment Area^a	Month	Volume of ground water extracted (Kgal)^b	Volume of vapor extracted (Kft³)^b
TFA	October	7,298	-
	November	7,416	-
	December	7,674	-
TFB	October	2,084	-
	November	2,484	-
	December	2,414	-
TFC	October	3,988	-
	November	4,118	-
	December	1,877	-
TFD	October	4,449	1,901
	November	4,048	1,862
	December	4,093	1,519
TFE	October	2,024	1,889
	November	2,052	2,070
	December	2,194	1,806
TFG	October	696	-
	November	585	-
	December	683	-
TFH	October	1,034	2,124
	November	1,023	2,177
	December	1,088	1,758
TOTAL^c		63,322	17,106

^a Totals include ground water and soil vapor extracted from the following facilities:

TFA area: TFA, TFA-E, TFA-W

TFB area: TFB

TFC area: TFC, TFC-E, TFC-SE

TFD area: TFD, TFD-E, TFD-HPD, TFD-S, TFD-SE, TFD-SS, TFD-W, VTFD-ETCS, VTFD-HPD, VTFD-HS

TFE area: TFE-E, TFE-HS, TFE-NW, TFE-SE, TFE-SW, TFE-W, VTFE-ELM, VTFE-HS

TFG area: TFG-1, TFG-N

TFH area: TF406, TF406-NW, TF518-N, TF518-PZ, TF5475-1, TF5475-2, TF5475-3, VTF406-HS, VTF511, VTF518-PZ, VTF5475

TFF started operation in February 1993 for fuel hydrocarbon remediation. In August 1995, the regulatory agencies agreed that the vadose zone remediation was complete, and in October 1996 a No Further Action status was granted for the ground water.

^b Totals are derived from individual extraction wells shown in Attachment B

^c Rounded number

Kft³ = thousands of cubic feet

Kgal = thousands of gallons

Table 2. VOC mass removed at the Livermore Site, October through December 2009.

Treatment Area^a	VOC mass removed from ground water (kg)	VOC mass removed from soil vapor (kg)	Total VOC mass removed (kg) ^b
TFA	1.0	-	1.0
TFB	0.7	-	0.7
TFC	1.4	-	1.4
TFD	6.8	1.1	7.9
TFE	1.7	1.3	3.0
TFG	0.2	-	0.2
TFH	1.1	13.7	14.8
TOTAL^b	12.9	16.1	29.0

Table 3. Historical summary of volumes of water and soil vapor removed at the Livermore Site through December 2009.

Treatment Area^a	Volume of ground water extracted (Mgal)	Volume of vapor extracted (Kft³)
TFA	1,641	-
TFB	386	-
TFC	400	-
TFD	864	58,017
TFE	318	132,557
TFG	63	-
TFH	140	181,847
TOTAL^b	3,812	372,421

Table 4. Historical summary of VOC mass removed from water and soil vapor at the Livermore Site through December 2009.

Treatment Area^a	VOC mass removed from ground water (kg)	VOC mass removed from soil vapor (kg)	Total VOC mass removed (kg) ^b
TFA	198	-	198
TFB	75	-	75
TFC	94	-	94
TFD	789	87	876
TFE	201	143	344
TFG	10	-	10
TFH	32	1,163	1,195
TOTAL^b	1,399	1,393	2,792

^a Refer to Table 1 footnote for facilities in each treatment facility area.^b Rounded number.

Abbreviations for Tables 2, 3 and 4:

Kft³ = thousands of cubic feet.

Kg = Kilograms.

Mgal = millions of gallons.

VOC = Volatile organic compound.

Attachment A

**VOC, Chromium, Bioassay,
Turbidity, and Chloride Analyses**

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFA													
TFA-I001	08-OCT-09	E601	<0.5	1.2	0.61	<0.5	1.4	<1	<0.5	7.5	<0.5	0.88	<0.5
TFA-I001	02-NOV-09	E601	<0.5	1.2	0.62	<0.5	1.3	<1	<0.5	7.6	<0.5	0.86	<0.5
TFA-I001	01-DEC-09	E601	<0.5	1.2	0.58	<0.5	1.3	<1	<0.5	7.2	<0.5	0.84	<0.5
TFA-E001	08-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E001	02-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E001	01-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E													
W-254	08-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	0.83	<1	<0.5	46	<0.5	1.2	<0.5
STU06-I	03-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	0.66	<1	<0.5	44	<0.5	1.2	<0.5
STU06-I	02-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	0.64	<1	<0.5	45	<0.5	1.2	<0.5
STU06-E	08-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
STU06-E	03-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
STU06-E	02-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-W^a													
W-404	22-OCT-09	E601	<0.5	<0.5	1.8	<0.5	2.9	<1	<0.5	12	<0.5	0.56	<0.5
W-404	19-NOV-09	E601	<0.5	<0.5	1.4	<0.5	2.4	<1	<0.5	10	<0.5	<0.5	<0.5
W-404	18-DEC-09	E601	<0.5	<0.5	1.3	<0.5	2.3	<1	<0.5	8.4	<0.5	<0.5	<0.5
TFA-W-E	22-OCT-09	E624	<1	<1	1.6	<1	2.6	<1	<1	9.8	<1	0.64	<1
TFB													
TFB-I002	08-OCT-09	E601	0.55	2.2	<0.5	<0.5	1.6	<1	3.5	1.8	<0.5	15	<0.5
TFB-I002	02-NOV-09	E601	0.55	2.2	<0.5	<0.5	1.6	<1	3.8	1.6	<0.5	14	<0.5
TFB-I002	01-DEC-09	E601	0.52	2	<0.5	<0.5	1.5	<1	3.9	1.5	<0.5	13	<0.5
TFB-E002	08-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	02-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	01-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC^b													
TFC-I003	12-OCT-09	E601	<0.5	1.1	<0.5	<0.5	0.91	<1	11	3.6	<0.5	9.9	<0.5
TFC-I003	02-NOV-09	E601	<0.5	1.1	<0.5	<0.5	0.85	<1	11	3	<0.5	8.9	<0.5
TFC-E003	12-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-E003	02-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFC-E													
MTU1-I	06-OCT-09	E601	<0.5	17	<0.5	<0.5	1.2	<1	11	0.74	<0.5	10	4.2
MTU1-I	04-NOV-09	E601	<0.5	16	<0.5	<0.5	1.2	<1	11	0.63	<0.5	10	5.2
MTU1-I	03-DEC-09	E601	<0.5	17	<0.5	<0.5	1.2	<1	11	0.67	<0.5	10	5.7
MTU1-E	06-OCT-09	E601	<0.5	0.93	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	04-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	03-DEC-09	E601	<0.5	0.59	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-SE													
PTU1-I	12-OCT-09	E601	<0.5	6.8	<0.5	<0.5	2.9	<1	14	0.52	<0.5	18	0.99
PTU1-I	02-NOV-09	E601	<0.5	7.2	<0.5	<0.5	2.6	<1	14	<0.5	<0.5	18	1
PTU1-I	01-DEC-09	E601	<0.5	8.1	<0.5	<0.5	3	<1	16	0.61	<0.5	21	1.2
PTU1-E	12-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	02-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	01-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD													
TFD-I004	09-OCT-09	E601	2.4	1.7	<0.5	<0.5	0.8	<1	<0.5	1.2	<0.5	55	31
TFD-I004	03-NOV-09	E601	2.3	1.7	<0.5	<0.5	0.94	<1	0.5	1.4	<0.5	53	31
TFD-I004	03-DEC-09	E601	2	1.6	<0.5	<0.5	1.1	<1	<0.5	1.7	<0.5	52	30
TFD-E004	09-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	03-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	03-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E													
PTU8-I	09-OCT-09	E601	5.1	1.4	<0.5	0.92	7.9	<1	0.56	5.9	<0.5	90	<0.5
PTU8-I	03-NOV-09	E601	4.4	1.3	0.57	1	8.4	<1	<0.5	6.4	<0.5	90	<0.5
PTU8-I	02-DEC-09	E601	4.6	2.4	0.67	1.6	13	<1	0.54	13	<0.5	110	<0.5
PTU8-E	09-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	03-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	02-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-HPD													
PTU10-I	07-OCT-09	E601	2	0.77	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	70	<0.5
PTU10-I	17-NOV-09	E601	1.9	0.59	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	56	<0.5
PTU10-I	10-DEC-09	E601	2.5	0.67	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	65	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFD-HPD (cont.)													
PTU10-E	07-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU10-E	17-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU10-E	10-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-S													
PTU2-I	15-OCT-09	E601	1.8	2.5	<0.5	0.58	7.9	<1	1.9	9.1	<0.5	100	<0.5
PTU2-I	16-NOV-09	E601	1.9	2.6	<0.5	0.55	7.7	<1	2.1	10	<0.5	110	<0.5
PTU2-I	21-DEC-09	E601	<0.5	0.65	<0.5	<0.5	1.9	<1	<0.5	3	<0.5	26	<0.5
PTU2-E	15-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	16-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	21-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-SE													
PTU11-I	09-OCT-09	E601	1.4	7	1.9	6.5	37	1.1	1.5	100	<0.5	270	<0.5
PTU11-I	05-NOV-09	E601	1.2	6.5	1.7	6.1	33	<1	1.5	93	<0.5	230	<0.5
PTU11-I	03-DEC-09	E601	1.1	5.2	1.3	4.8	26	<1	1.2	81	<0.5	200	<0.5
PTU11-E	09-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	05-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	03-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-SS													
PTU12-I	12-OCT-09	E601	3.5	3	0.51	1.5	11	<1	1.2	25	<0.5	120	4.5
PTU12-I	16-NOV-09	E601	3.6	2.7	<0.5	1.5	10	<1	1.1	21	<0.5	130	4.4
PTU12-I	21-DEC-09	E601	3.3	4.7	0.67	2.1	15	<1	1.7	33	<0.5	130	4.5
PTU12-E	12-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	16-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	21-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-W													
PTU6-I	15-OCT-09	E601	<0.5	3.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.5	61
PTU6-I	18-NOV-09	E601	<0.5	3.4	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.7	64
PTU6-I	23-DEC-09	E601	<0.5	4.8	<0.5	<0.5	<0.5	<1	0.71	<0.5	<0.5	3.8	100
PTU6-E	15-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	18-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	23-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-E													
PTU3-I	15-OCT-09	E601	<0.5	2	<0.5	<0.5	14	<1	11	24	<0.5	90	<0.5
PTU3-I	17-NOV-09	E601	<0.5	2.4	<0.5	<0.5	15	<1	12	25	<0.5	97	<0.5
PTU3-I	11-DEC-09	E601	<0.5	2.3	<0.5	<0.5	30	<1	13	50	<0.5	130	<0.5
TFE-E													
PTU3-E	15-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU3-E	17-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU3-E	11-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-HS													
GTU07-I	22-OCT-09	E601	1.9	2.9	<0.5	<0.5	8.2	2.1	7	11	<0.5	260	<0.5
GTU07-I	17-NOV-09	E601	1.9	2.8	<0.5	<0.5	7.9	2	7	11	<0.5	230	<0.5
GTU07-I	11-DEC-09	E601	2	1.9	<0.5	<0.5	6.5	1.8	7.3	14	<0.5	270	<0.5
TFE-HS													
GTU07-E	22-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU07-E	17-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU07-E	11-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-NW													
PTU9-I	15-OCT-09	E601	0.55	3	<0.5	<0.5	<0.5	<1	1	<0.5	<0.5	11	<0.5
PTU9-I	18-NOV-09	E601	0.59	3	<0.5	<0.5	<0.5	<1	1.2	<0.5	<0.5	12	<0.5
PTU9-I	18-DEC-09	E601	0.5	2.5	<0.5	<0.5	<0.5	<1	0.98	<0.5	<0.5	9.7	<0.5
TFE-NW													
PTU9-E	15-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	18-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	18-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-SE													
W-359	28-OCT-09	E601	2.4	<0.5	<0.5	<0.5	13	<1	9.5	6.1	<0.5	87	0.65
MTU04-I	05-NOV-09	E601	2.6	0.53	<0.5	<0.5	12	<1	8.4	6.1	<0.5	84	0.62
MTU04-I	03-DEC-09	E601	3	0.57	<0.5	<0.5	12	<1	7.1	6.8	<0.5	94	0.64
TFE-SE													
MTU04-E	28-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU04-E	05-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU04-E	03-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-SW													
MTU03-I	05-OCT-09	E601	2.3	2.2	<0.5	<0.5	3.4	6.2	0.84	1.7	<0.5	66	<0.5
MTU03-I	17-NOV-09	E601	<0.5	0.62	<0.5	<0.5	1.6	2.5	0.99	0.76	<0.5	14	<0.5
MTU03-I	10-DEC-09	E601	<0.5	0.73	<0.5	<0.5	1.8	2.9	1.1	0.87	<0.5	16	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-SW (cont.)													
MTU03-E	05-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU03-E	17-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU03-E	10-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-W													
MTU05-I	05-OCT-09	E601	<0.5	0.89	<0.5	<0.5	2.2	1.4	13	5	<0.5	27	<0.5
MTU05-I	17-NOV-09	E601	<0.5	0.97	<0.5	<0.5	2.3	1.4	13	5.4	<0.5	31	<0.5
MTU05-I	10-DEC-09	E601	<0.5	1	<0.5	<0.5	2.6	1.4	15	6.1	<0.5	33	0.53
MTU05-E	05-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU05-E	17-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU05-E	10-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFG-1													
W-1111	22-OCT-09	E601	3.2	9.7	<0.5	<0.5	1.2	<1	0.55	1.4	<0.5	4.2	<0.5
GTU01-I	16-NOV-09	E601	2.7	8.7	<0.5	<0.5	0.96	<1	0.5	1.2	<0.5	3.9	<0.5
GTU01-I	18-DEC-09	E601	3	9.2	<0.5	<0.5	1.1	<1	0.5	1.4	<0.5	4.2	<0.5
GTU01-E	22-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU01-E	16-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU01-E	18-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFG-N													
MTU02-I	15-OCT-09	E601	<0.5	5.5	<0.5	<0.5	0.92	<1	1.3	15	<0.5	4.7	<0.5
MTU02-I	18-NOV-09	E601	<0.5	5.6	<0.5	<0.5	0.88	<1	1.2	15	<0.5	4.3	<0.5
MTU02-I	18-DEC-09	E601	<0.5	5.9	<0.5	<0.5	1.1	<1	1.3	15	<0.5	4.6	<0.5
MTU02-E	15-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU02-E	18-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU02-E	18-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF406													
PTU5-I	12-OCT-09	E601	<0.5	0.7	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.7	<0.5
PTU5-I	16-NOV-09	E601	<0.5	0.8	<0.5	<0.5	<0.5	<1	0.53	<0.5	<0.5	6.9	<0.5
PTU5-I	18-DEC-09	E601	<0.5	0.81	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	6.2	<0.5
PTU5-E	12-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU5-E	16-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU5-E	18-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TF406-NW													
W-1801	12-OCT-09	E601	<0.5	2.2	<0.5	<0.5	<0.5	<1	9.5	1.1	<0.5	38	<0.5
GTU03-I	16-NOV-09	E601	<0.5	1.8	<0.5	<0.5	<0.5	<1	7.4	0.78	<0.5	32	<0.5
GTU03-I	18-DEC-09	E601	<0.5	1.9	<0.5	<0.5	<0.5	<1	5.8	0.69	<0.5	27	<0.5
GTU03-E	12-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU03-E	16-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU03-E	18-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF518-N^c	---	---	--	--	--	--	--	--	--	--	--	--	--
TF5475-1^d	---	---	--	--	--	--	--	--	--	--	--	--	--
TF5475-2													
GTU09-I	06-OCT-09	E601	1.8	22	0.7	2.5	19	<1	6.7	36	<0.5	300	<0.5
GTU09-I	04-NOV-09	E601	1.8	20	0.62	2.4	18	<1	7.5	34	<0.5	260	<0.5
GTU09-I	03-DEC-09	E601	1.9	20	0.66	2.4	18	<1	7.4	35	<0.5	350	<0.5
GTU09-E	06-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	04-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	03-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF5475-3^e	---	---	--	--	--	--	--	--	--	--	--	--	--

Notes on following page.

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

^a TFA-W effluent is discharged to the Livermore Water Reclamation Plant in accordance with Permit #151OG (2006-2008). The discharge limit for Total Toxic Organics is 1.0 mg/L.

^b TFC did not operate during December due to mechanical and electronic upgrades to the system.

^c TF518-N did not operate during this reporting period due to mixed waste disposition issues.

^d TF5475-1 did not operate during this reporting period due to mixed waste disposition issues.

^e TF5475-3 did not operate during this reporting period due to mixed waste disposition issues.

Notes:

CCl₄ = Carbon tetrachloride

CHCl₃ = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFA													
W-109	05-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	0.61	<1	<0.5	2.5	<0.5	<0.5	<0.5
W-262 ^a	29-JAN-08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	0.56	<0.5	<0.5	<0.5
W-408	05-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	0.71	<0.5	<0.5	<0.5
W-415	05-NOV-09	E601	<0.5	1.2	1	<0.5	2	<1	<0.5	14	<0.5	1.3	<0.5
W-457	05-NOV-09	E601	<0.5	<0.5	1.6	<0.5	1.5	<1	<0.5	9.1	<0.5	0.59	<0.5
W-518 ^a	24-APR-08	E601	<0.5	<0.5	7.3	<0.5	4	<1	<0.5	6.3	<0.5	0.67	<0.5
W-522 ^a	24-APR-08	E601	<0.5	<0.5	2.3	<0.5	1.5	<1	<0.5	3.5	<0.5	<0.5	<0.5
W-605	05-NOV-09	E601	<0.5	<0.5	1.3	<0.5	1.6	<1	<0.5	18	<0.5	0.97	<0.5
W-614	05-NOV-09	E601	<0.5	0.66	<0.5	<0.5	<0.5	<1	<0.5	7.7	<0.5	<0.5	<0.5
W-712	05-NOV-09	E601	3	2.9	1.2	<0.5	3.8	<1	<0.5	1.8	<0.5	3.6	<0.5
W-714	05-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	0.5	<1	<0.5	11	<0.5	<0.5	<0.5
W-903 ^a	29-JAN-08	E601	<0.5	<0.5	1.8	<0.5	1.4	<1	<0.5	7.5	<0.5	0.52	<0.5
W-904	21-DEC-09	E601	<0.5	<0.5	1.2	<0.5	1.8	<1	<0.5	11	<0.5	0.6	<0.5
W-1001	03-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
W-1004	05-NOV-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	3.6	<0.5	<0.5	<0.5
W-1009	05-NOV-09	E601	1.3	5.3	0.94	<0.5	3.6	<1	0.65	13	<0.5	2.2	<0.5
TFA-E													
W-254	08-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	0.83	<1	<0.5	46	<0.5	1.2	<0.5
TFA-W													
W-404	18-DEC-09	E601	<0.5	<0.5	1.3	<0.5	2.3	<1	<0.5	8.4	<0.5	<0.5	<0.5
TFB													
W-357	08-OCT-09	E601	1.6	2.5	<0.5	<0.5	1.6	<1	4.9	1.2	<0.5	37	<0.5
W-610	08-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	2	<1	2.6	1.1	<0.5	3.1	<0.5
W-620	08-OCT-09	E601	<0.5	1.4	<0.5	<0.5	1.8	<1	2.7	1.5	<0.5	6.2	<0.5
W-621	08-OCT-09	E601	<0.5	0.76	<0.5	<0.5	0.64	<1	1.3	0.53	<0.5	4.4	<0.5
W-655	08-OCT-09	E601	<0.5	0.84	<0.5	<0.5	<0.5	<1	3	<0.5	<0.5	2.7	<0.5
W-704	08-OCT-09	E601	0.64	3.4	<0.5	<0.5	2.1	<1	5.4	3.5	<0.5	26	<0.5
W-1423	08-OCT-09	E601	0.87	4.8	<0.5	<0.5	3.3	<1	3.9	1.9	<0.5	10	<0.5
TFC													
W-701	12-OCT-09	E601	<0.5	2.2	<0.5	<0.5	1.9	<1	34	0.59	<0.5	11	<0.5
W-1015	12-OCT-09	E601	<0.5	0.57	<0.5	<0.5	1.1	<1	2.3	1.1	<0.5	5.4	<0.5
W-1102 ^a	06-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	8	<0.5	<0.5	2.4	<0.5
W-1103	12-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	1.8	<0.5
W-1104	11-OCT-09	E601	<0.5	0.64	<0.5	<0.5	<0.5	<1	3.2	7.1	<0.5	13	<0.5
W-1116	12-OCT-09	E601	<0.5	1.5	<0.5	<0.5	0.67	<1	8	2.4	<0.5	4.2	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFC-E													
W-368	06-OCT-09	E601	<0.5	12	<0.5	<0.5	0.9	<1	17	2.1	<0.5	15	6.1
W-413	06-OCT-09	E601	<0.5	18	<0.5	<0.5	1.4	<1	11	<0.5	<0.5	8.7	4.3
TFC-SE													
W-1213	12-OCT-09	E601	<0.5	4.6	<0.5	<0.5	3.6	<1	8.7	<0.5	<0.5	19	<0.5
W-2201	12-OCT-09	E601	<0.5	8.7	<0.5	<0.5	2.5	<1	17	0.76	<0.5	19	1.5
TFD													
W-351	03-DEC-09	E601	8.5	1.5	<0.5	0.91	4.5	<1	1.6	5.7	<0.5	160	9.1
W-653	03-DEC-09	E601	28	8.9	<0.5	<0.5	0.96	1.2	2.2	0.84	<0.5	990	<0.5
W-906	03-DEC-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3.8	<0.5
W-907-2 ^a	08-APR-09	E601	<0.5	7.2	<0.5	0.6	4.2	<1	1.6	7.8	<0.5	92	<0.5
W-1206	03-DEC-09	E601	0.67	1.1	<0.5	<0.5	0.64	<1	<0.5	1	<0.5	23	<0.5
W-1208	03-DEC-09	E601	2.8	1.9	<0.5	<0.5	1.3	<1	0.57	2	<0.5	67	49
W-2011 ^a	27-AUG-09	E601	<0.5	0.56	<0.5	<0.5	<0.5	12	<0.5	<0.5	<0.5	4.8	<0.5
W-2101	03-DEC-09	E601	9.7	3.3	<0.5	<0.5	<0.5	<1	0.68	0.51	<0.5	350	<0.5
W-2102 ^a	28-AUG-09	E601	9.1	7.5	<0.5	<0.5	0.51	2.3	2.6	0.54	<0.5	660	<0.5
TFD-E													
W-1253 ^{ab}	11-FEB-08	E601	6	6.2	<5	<5	16	<10	17	12	<5	2300	<5
W-1255 ^a	11-FEB-08	E601	4.4	2	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	260	<0.5
W-1301	09-OCT-09	E601	5.8	2.7	2.7	8.9	67	<1	0.8	32	<0.5	340	0.5
W-1303 ^a	14-OCT-08	E601	3	2.9	0.8	3.1	7.2	<1	<0.5	6.7	<0.5	150	23
W-1306	09-OCT-09	E601	5.1	3	<0.5	<0.5	0.99	<1	<0.5	4.2	<0.5	110	<0.5
W-1307	09-OCT-09	E601	1.8	<0.5	<0.5	<0.5	<0.5	<1	<0.5	0.54	<0.5	21	<0.5
W-1404 ^a	08-JUL-09	E601	0.69	10	4.7	28	22	5.6	<0.5	92	<0.5	310	0.74
W-1550	09-OCT-09	E601	15	3.6	<0.5	<0.5	3.1	<1	1.6	11	<0.5	150	<0.5
W-2006 ^a	14-OCT-08	E601	1.3	2.4	2.9	9.5	88	1.3	<0.5	83	<0.5	690	<0.5
W-2203 ^a	08-JUL-09	E601	17	2.2	<0.5	<0.5	3.2	<1	4.2	5.2	<0.5	140	<0.5
TFD-HPD													
W-1254	07-OCT-09	E601	2.1	0.84	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	72	<0.5
W-1551 ^a	24-AUG-09	E601	4	2.1	<0.5	<0.5	<0.5	<1	1.6	<0.5	<0.5	170	<0.5
W-1552 ^a	24-AUG-09	E601	<0.5	1.1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	26	<0.5
W-1650 ^a	20-AUG-09	E601	6.1	1.6	<0.5	<0.5	<0.5	<1	2.2	<0.5	<0.5	260	<0.5
W-1651 ^a	24-AUG-09	E601	1.5	1	<0.5	<0.5	<0.5	<1	0.85	<0.5	<0.5	74	<0.5
W-1652 ^a	20-AUG-09	E601	1.2	1.1	<0.5	<0.5	<0.5	2.4	<0.5	0.63	<0.5	150	<0.5
W-1653 ^a	20-AUG-09	E601	0.58	0.67	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	49	<0.5
W-1654 ^a	24-AUG-09	E601	<0.5	0.68	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	25	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFD-HPD (cont.)													
W-1655 ^a	24-AUG-09	E601	0.62	1.1	<0.5	<0.5	<0.5	<1	<0.5	0.91	<0.5	63	<0.5
W-1656 ^a	20-AUG-09	E601	2.1	3	<0.5	<0.5	<0.5	<1	0.55	<0.5	<0.5	97	<0.5
W-1657 ^a	24-AUG-09	E601	8.9	4	<0.5	<0.5	<0.5	<1	4	<0.5	<0.5	730	<0.5
TFD-S													
W-1503	15-OCT-09	E601	2.4	3	<0.5	0.61	6.1	<1	1.5	5.3	<0.5	120	<0.5
W-1504	15-OCT-09	E601	<0.5	0.96	<0.5	<0.5	10	1	2.4	15	<0.5	80	<0.5
W-1510 ^a	22-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	1.6	<1	<0.5	2.7	<0.5	21	<0.5
TFD-SE													
W-314 ^a	07-JAN-08	E601	1.6	8.9	0.72	1.7	11	<1	5	21	<0.5	170	<0.5
W-1308	09-OCT-09	E601	<0.5	1.8	2.2	8.1	26	1.8	<0.5	110	<0.5	230	<0.5
W-1403	09-OCT-09	E601	2.6	19	1.4	6.7	44	<1	4.1	82	<0.5	400	<0.5
W-1904 ^a	26-DEC-07	E601	<0.5	<0.5	0.54	0.67	5.8	<1	<0.5	39	<0.5	42	<0.5
W-2005	09-OCT-09	E601	1.3	1.4	1.2	3.2	38	<1	<0.5	62	<0.5	170	<0.5
SIP-ETC-201 ^a	26-DEC-07	E601	<0.5	0.55	0.59	1.1	8.5	<1	<0.5	59	<0.5	60	<0.5
TFD-SS													
W-1523	12-OCT-09	E601	5.4	3.7	0.65	1.8	14	<1	1.7	27	<0.5	180	<0.5
W-1601	12-OCT-09	E601	3.9	4.3	1.7	6	29	1.3	1.7	87	<0.5	270	<0.5
W-1602	12-OCT-09	E601	<0.5	1.7	<0.5	<0.5	<0.5	<1	<0.5	0.91	<0.5	13	12
W-1603 ^a	11-APR-08	E601	1.6	2	1.2	4.8	16	1.2	<0.5	33	<0.5	170	8.6
TFD-W													
W-1215 ^a	15-JUL-08	E601	<0.5	6.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.6	34
W-1216	15-OCT-09	E601	<0.5	3.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.4	60
W-1902 ^a	22-JUL-09	E601	0.69	3.3	<0.5	<0.5	<0.5	<1	0.64	<0.5	<0.5	8.3	98
TFE-E													
W-566	15-OCT-09	E601	0.57	2.4	<0.5	<0.5	4	<1	13	3.4	<0.5	38	<0.5
W-1109	19-NOV-09	E601	<0.5	0.68	0.62	<0.5	51	<1	9.4	100	<0.5	290	<0.5
W-1903 ^a	06-JUL-09	E601	<0.5	<0.5	1.3	<0.5	39	<1	7.6	88	<0.5	91	<0.5
W-1909 ^a	27-AUG-09	E601	<0.5	1.4	3.4	<0.5	180	3.1	17	350	<0.5	540	<0.5
W-2305 ^a	24-JUN-09	E601	<0.5	1.7	2.3	0.56	300	3.8	38	700	<0.5	1700	0.51
TFE-HS													
W-2012	22-OCT-09	E601	2.3	3.7	<0.5	<0.5	10	2.6	8.6	13	<0.5	220	0.51
W-2105 ^a	16-JUN-09	E601	<0.5	0.74	<0.5	<0.5	0.79	<1	1.6	8.6	<0.5	210	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-NW													
W-1211	15-OCT-09	E601	0.52	3	<0.5	<0.5	<0.5	<1	1	<0.5	<0.5	11	<0.5
W-1409 ^a	10-APR-08	E601	<0.5	<0.5	<0.5	<0.5	1.2	<1	0.57	1.7	<0.5	30	<0.5
TFE-SE													
W-359	28-OCT-09	E601	2.4	<0.5	<0.5	<0.5	13	<1	9.5	6.1	<0.5	87	0.65
TFE-SW													
W-1518	05-OCT-09	E601	<0.5	0.69	<0.5	<0.5	2.2	3.3	1.2	0.76	<0.5	15	<0.5
W-1520 ^a	01-JUL-09	E601	6.5	4.5	<0.5	1.2	1.2	2.9	<0.5	3.8	<0.5	60	<0.5
W-1522	05-OCT-09	E601	6.3	4.7	0.86	0.82	7.2	12	1.1	4.4	<0.5	150	<0.5
TFE-W													
W-292	05-OCT-09	E601	<0.5	0.66	<0.5	<0.5	0.78	2.7	0.95	0.81	<0.5	16	<0.5
W-305	05-OCT-09	E601	<0.5	1.1	<0.5	<0.5	2.5	<1	16	6.2	<0.5	30	<0.5
TFG-1													
W-1111	22-OCT-09	E601	3.2	9.7	<0.5	<0.5	1.2	<1	0.55	1.4	<0.5	4.2	<0.5
TFG-N													
W-1806	15-OCT-09	E601	<0.5	8.4	<0.5	<0.5	0.53	<1	<0.5	11	<0.5	2.2	<0.5
W-1807	19-NOV-09	E601	<0.5	4.5	<0.5	<0.5	1.1	<1	1.8	17	<0.5	5.5	<0.5
TF406													
W-1309	12-OCT-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	2	<0.5
W-1310	12-OCT-09	E601	<0.5	0.91	<0.5	<0.5	<0.5	<1	0.54	<0.5	<0.5	7.5	<0.5
GSW-445 ^a	26-MAR-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3	<0.5
TF406-NW													
W-1801	12-OCT-09	E601	<0.5	2.2	<0.5	<0.5	<0.5	<1	9.5	1.1	<0.5	38	<0.5
TF518-N^c													
W-1410 ^a	23-JAN-08	E601	2.8	1.5	<0.5	<0.5	<0.5	<1	<0.5	0.83	<0.5	18	<0.5
TF518-PZ													
W-1615	09-NOV-09	E601	<0.5	0.64	<0.5	<0.5	0.83	<1	<0.5	15	<0.5	68	<0.5
W-518-1913 ^a	07-FEB-08	E601	<0.5	<0.5	<0.5	<0.5	7.5	<1	<0.5	18	<0.5	34	<0.5
W-518-1914 ^a	07-FEB-08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	20	<0.5	5.6	<0.5
W-518-1915 ^{ab}	17-AUG-09	E601	<2.5	<2.5	<2.5	<2.5	23	<5	<2.5	340	<2.5	1900	<2.5
SVB-518-201 ^a	07-FEB-08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	35	<0.5	8.5	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TF518-PZ (cont.)													
SVB-518-204 ^a	07-FEB-08	E601	<0.5	0.63	<0.5	<0.5	1.4	<1	<0.5	43	<0.5	550	<0.5
TF5475-1^c													
W-1302-2 ^a	18-JUL-07	E601	1.8	19	0.73	3.4	20	<1	7.4	41	<0.5	260	<0.5
TF5475-2													
W-1108	08-DEC-09	E601	1.9	20	0.6	2.5	17	<1	7.6	35	<0.5	310	<0.5
W-1415	08-DEC-09	E601	0.7	4.9	<0.5	<0.5	7.8	<1	2.8	10	<0.5	76	<0.5
TF5475-3^c													
W-1604 ^a	21-AUG-07	E601	2.9	29	0.94	5.2	23	<1	17	45	<0.5	390	<0.5
W-1605 ^a	21-AUG-07	E601	1.3	13	<0.5	5.7	7.2	1.2	4	21	<0.5	210	<0.5
W-1608 ^a	21-AUG-07	E601	<0.5	9.5	0.71	3.2	2.1	3.2	1.8	7.1	<0.5	69	<0.5
W-1609 ^a	21-AUG-07	E601	<0.5	13	0.55	9.4	2.7	<1	0.94	7.9	<0.5	62	<0.5

Notes on following page.

Table A-2. VOC analyses of samples from treatment facility extraction wells.

^a Most recent VOC sample results available.

^b Elevated detection limit due to dilution.

^c Treatment Facility did not operate during reporting period. Please refer to Table A-1 for details.

Notes:

CCl₄ = Carbon tetrachloride

CHCl₃ = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
VTDF-ETCS													
W-1904 ^a	09-JUN-09	TO15DIT	<0.005	0.041	0.0056	<0.005	0.25	<0.005	<0.005	2.1	<0.005	0.67	<0.005
W-ETC-2003	26-OCT-09	TO15DI	<0.005	<0.005	<0.005	<0.005	0.031	<0.005	<0.005	0.6	<0.005	0.15	<0.005
W-ETC-2004A	26-OCT-09	TO15DI	<0.005	0.0099	<0.005	<0.005	<0.005	<0.005	<0.005	0.86	<0.005	0.18	<0.005
W-ETC-2004B	26-OCT-09	TO15DI	<0.012	<0.012	<0.012	<0.012	0.13	<0.012	<0.012	2.4	<0.012	2.2	<0.012
SIP-ETC-201 ^a	09-JUN-09	TO15DIT	<0.005	0.009	0.037	0.0059	0.65	<0.005	<0.005	2.9	<0.005	1.4	<0.005
VTDF-HPD													
W-1552 ^a	13-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.005	0.2	<0.005
W-1650 ^a	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1651 ^a	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1652 ^a	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1653 ^a	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1654 ^a	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1655 ^a	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1656 ^a	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1657 ^a	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-HPA-002A	24-NOV-09	TO15DIT	0.016	0.011	<0.005	<0.005	0.006	0.014	<0.005	0.075	<0.005	0.56	<0.005
W-HPA-002B ^a	23-JUL-09	TO15DIT	<0.011	0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.056	<0.011	0.46	<0.011
VTDF-HS													
W-653	03-NOV-09	TO15DIT	0.026	<0.005	<0.005	<0.005	<0.005	<0.005	0.016	<0.005	<0.005	0.58	<0.005
W-2011 ^a	15-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.081	<0.005
W-2101	03-NOV-09	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.052	<0.005
W-2102 ^a	15-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.11	<0.005
VTFE-ELM													
W-1903 ^a	08-JUL-09	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1909 ^a	10-JUL-09	TO15DIT	<0.005	<0.005	0.0058	<0.005	0.95	<0.005	0.44	0.75	<0.005	1.5	<0.005
W-2305 ^a	10-JUL-09	TO15DIT	<0.01	<0.01	<0.01	<0.01	6	0.012	2.3	3.3	<0.01	7.5	0.014
W-543-001 ^a	01-JUL-09	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.11	<0.005	0.017	0.34	<0.005	0.32	<0.005
W-543-003	26-OCT-09	TO15DI	<0.005	0.014	<0.005	<0.005	0.21	<0.005	0.062	0.51	<0.005	0.83	<0.005
W-543-1908 ^a	01-JUL-09	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.072	<0.005	0.019	0.13	<0.005	0.33	<0.005
VTFE-HS													
W-ETS-2008A	26-OCT-09	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.062	<0.005	0.13	<0.005
W-ETS-2008B	26-OCT-09	TO15DI	<0.017	<0.017	<0.017	<0.017	0.045	<0.017	0.11	1	<0.017	2.8	<0.017
W-ETS-2009 ^a	13-AUG-09	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.022	<0.005	0.18	<0.005
W-ETS-2010A	26-OCT-09	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.11	<0.005	0.2	<0.005
W-ETS-2010B ^a	05-AUG-09	TO15DIT	<0.005	<0.005	0.016	<0.005	0.011	0.03	0.046	0.095	0.051	1	<0.005

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
VTFE-HS (cont.)													
W-2105 ^a	30-JAN-08	TO15DI	<0.005	<0.005	<0.005	<0.005	0.014	<0.005	0.01	0.022	<0.005	0.13	<0.005
VTF406-HS													
W-217	22-OCT-09	TO15DI	0.21	0.031	0.015	<0.014	1.8	<0.014	0.32	2.1	<0.014	2.4	<0.014
W-514-2007A	22-OCT-09	TO15DI	0.1	0.014	<0.012	<0.012	0.97	<0.012	0.082	0.81	<0.012	1.9	0.018
W-514-2007B	22-OCT-09	TO15DI	0.013	<0.005	<0.005	<0.005	0.012	<0.005	0.02	0.049	<0.005	0.35	0.17
VTF511^b													
W-274 ^a	04-OCT-06	TO15DI	0.14	0.02	<0.0062	<0.0062	0.07	<0.0062	0.014	0.33	<0.0062	6.1	0.38
W-1517 ^a	20-DEC-07	TO15DI	0.0066	<0.005	<0.005	<0.005	0.0068	<0.005	<0.005	0.022	<0.005	0.65	0.016
W-2204 ^a	21-MAY-09	TO15DIT	0.098	0.034	<0.005	0.038	0.019	<0.005	0.0082	0.42	<0.005	3.9	<0.005
W-2206 ^a	21-MAY-09	TO15DIT	0.013	0.022	<0.005	0.024	<0.005	<0.005	<0.005	0.24	<0.005	2	<0.005
W-2207A ^a	14-MAY-09	TO15DIT	<0.005	0.0055	<0.005	<0.005	0.0053	<0.005	<0.005	0.01	<0.005	1.5	<0.005
W-2207B	03-NOV-09	TO15DIT	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	6.3	<0.05
W-2208A ^a	14-MAY-09	TO15DIT	0.025	0.016	<0.01	<0.01	0.05	<0.01	<0.01	0.019	<0.01	9.8	0.026
W-2208B	03-NOV-09	TO15DIT	<0.5	<0.5	<0.5	<0.5	3.3	<0.5	<0.5	1.1	<0.5	55	<0.5
W-2205 ^a	21-MAY-09	TO15DIT	0.18	0.033	<0.005	0.0052	0.045	<0.005	0.0078	0.23	<0.005	3.6	0.012
VTF518-PZ													
W-1615	03-DEC-09	TO15DIT	<0.056	<0.056	<0.056	<0.056	0.61	<0.056	0.4	6.8	<0.056	12	<0.056
W-518-1913 ^a	17-AUG-09	TO15DIT	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	0.19	<0.17
W-518-1914 ^a	17-AUG-09	TO15DIT	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	1.1	<0.12	0.61	<0.12
W-518-1915	03-DEC-09	TO15DIT	<0.5	<0.5	<0.5	<0.5	0.78	<0.5	<0.5	42	<0.5	170	<0.5
SVB-518-201 ^a	14-AUG-09	TO15DIT	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	0.26	<0.076
SVB-518-204 ^a	15-JAN-08	TO15DI	<0.02	<0.02	<0.02	<0.02	0.051	<0.02	<0.02	2.4	<0.02	15	<0.02
VTF5475^c													
W-ETS-507 ^a	23-SEP-09	TO15DI	<0.005	2.7	<0.005	0.023	<0.005	<0.005	<0.005	0.54	<0.005	2.1	<0.005
W-1605 ^a	06-SEP-07	TO15DI	0.0069	0.17	<0.005	0.15	0.11	<0.005	0.036	0.1	<0.005	0.85	<0.005
W-1608 ^a	06-SEP-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0061	<0.005
W-2211 ^a	23-SEP-09	TO15DI	<0.005	0.036	<0.005	0.0066	0.014	<0.005	<0.005	0.024	<0.005	0.2	<0.005
W-2212 ^a	23-SEP-09	TO15DI	<0.005	0.021	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-2302 ^a	23-SEP-09	TO15DI	<0.005	0.0072	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-2303 ^a	23-SEP-09	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SVI-ETS-504 ^a	12-OCT-07	TO15DI	<0.005	0.32	0.0052	0.14	0.073	<0.005	<0.005	0.064	<0.005	0.34	<0.005

Notes on following page.

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

^a Most recent VOC vapor sample results available.

^b VTF511 did not operate during the month of December due to facility maintenance issues.

^c VTF5475 did not operate during reporting period due to mixed waste disposition issues.

Notes:

CCl_4 = Carbon tetrachloride

CHCl_3 = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-4. Chromium analyses of influent, effluent and receiving water samples by treatment facility.

Treatment Facility	Sample Station	Date Sampled	Chromium (total)^a mg/L (ppm)	Hexavalent Chromium mg/L (ppm)
TFB	TFB-E002	08-OCT-09	0.018	NA
	TFB-E002	02-NOV-09	0.019	NA
	TFB-E002	01-DEC-09	0.018	NA
TFC	TFC-E003	12-OCT-09	0.019	NA
	TFC-E003	02-NOV-09	0.021	NA
TFC-E	MTU1-E	06-OCT-09	0.0053	NA
	MTU1-E	04-NOV-09	0.0039	NA
	MTU1-E	03-DEC-09	0.11	NA
TFC-SE	PTU1-E	12-OCT-09	0.029	NA
	PTU1-E	02-NOV-09	0.031	NA
	PTU1-E	01-DEC-09	0.017	NA
TFE-E	PTU3-I	15-OCT-09	0.0098	NA
	PTU3-E	15-OCT-09	0.0096	NA
TFG-N	MTU02-I	15-OCT-09	0.0069	NA
	MTU02-E	15-OCT-09	0.0067	NA

^aA discharge limit of 0.050 ppm is set for total chromium during the dry season (April 1-November 30), and no limit is set for total chromium for the wet season (December 1-March 31); however, a limit of 0.022 ppm hexavalent chromium applies during the wet season. Discharge limits are defined in the Explanation of Significant Differences for metals discharge limits (April 1997).

Shaded values exceeded the discharge limit. See text for explanation.

Table A-5. Bioassay, turbidity, and chloride analyses of influent and effluent samples by treatment facility.

Treatment Facility	Sample Station	Date Sampled	Aquatic Bioassay^a Percent Survival	Turbidity Nephelometric Turbidity Units (NTU)	Chloride (mg/L)
TFA	TFA-I001	08-OCT-09	NA	NA	79
TFA	TFA-E001	08-OCT-09	100 (100)	<0.1	79
TFE-E	PTU3-E	15-OCT-09	100 (100)	NA	NA
TFE-SE	MTU04-E	28-OCT-09	NA	0.2	NA
TFG-N	MTU02-E	15-OCT-09	100 (100)	NA	NA

^aTest species was Fathead minnow and the test duration was 96 hours.

Percent survival in the control group samples shown in parentheses.

Note: NA = not applicable

Explanation of Abbreviations

TFA-I001 is a sampling port located immediately prior to the TFA Treatment System.

TFA-E001 is a sampling port located immediately after the TFA Treatment System, at the beginning of the discharge pipeline.

TFA receiving water is routinely sampled at the TFG-ASW location.

TFA-W-I is an influent sampling port prior to the sediment bag filter immediately following W-404.

TFA-W-E is an effluent sampling port immediately following the sediment bag filter; the water is then discharged to the Livermore Water Reclamation Plant (LWRP).

TFB-I002 is a sampling port located immediately prior to the TFB Treatment System.

TFB-E002 is a sampling port located immediately after the TFB Treatment System, at the beginning of the discharge pipeline.

TFB-R002 is a sampling station in the drainage ditch north of TFB, located approximately 75 ft downstream from the discharge point.

TFC-I003 is a sampling port located immediately prior to the TFC Treatment System.

TFC-E003 is a sampling port located immediately after the TFC Treatment System, at the beginning of the discharge pipeline.

TFC-R003 is a sampling station in Arroyo Las Positas, located approximately 75 ft downstream from the TFC discharge point.

TFD-I004 is a sampling port located immediately prior to the TFD Treatment System.

TFD-E004 is a sampling port located immediately after the TFD Treatment System, prior to discharge to the Drainage Retention Basin or to the underground discharge pipeline leading to Arroyo Las Positas.

TFD-R004 is now combined with and collected at the TFC-R003 location. Results are reported under TFC-R003, as approved by the RWQCB.

CRD1-I is a sampling port located immediately prior to the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1).

CRD1-E is the effluent from the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1) and then reinjected at W-1302.

CRD2-I is a sampling port located immediately prior to the catalytic columns in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2).

CRD2-E is the effluent from the last catalytic column in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2) and then reinjected at W-1610.

GTU01-I is a sampling port located immediately prior to GTU01, which is currently operating in the TFG-1 area.

GTU01-E is a sampling port located immediately after GTU01, which is currently operating in the TFG-1 area.

GTU01 receiving water is routinely sampled at the TFG-ASW location.

GTU03-I is a sampling port located immediately prior to GTU03, which is currently operating in the TF406 Northwest area.

GTU03-E is a sampling port located immediately after GTU03, which is currently operating in the TF406 Northwest area.

GTU03 receiving water is routinely sampled at the TFC-R003 location.

GTU07-I is a sampling port located immediately prior to GTU07, which is currently operating in the TFE Hotspot area.

GTU07-E is a sampling port located immediately after GTU07, which is currently operating in the TFE Hotspot area.

GTU07 receiving water is routinely sampled at the TFC-R003 location.

GTU09-I is a sampling port located immediately prior to GTU09, which is currently operating in the TF5475 area.

GTU09-E is a sampling port located immediately after GTU09, which is currently operating in the TF5475 area.

GTU09 receiving water is routinely sampled at the TFC-R003 location.

MTU02-I is a sampling port located immediately prior to MTU02, which is currently operating in the TFG North area.

MTU02-E is a sampling port located immediately after MTU02, which is currently operating in the TFG North area.

MTU02 receiving water is routinely sampled at the TFC-R003 location.

MTU03-I is a sampling port located immediately prior to MTU03, which is currently operating in the TFE Southwest area.

MTU03-E is a sampling port located immediately after MTU03, which is currently operating in the TFE Southwest area.

MTU03 receiving water is routinely sampled at the TFC-R003 location.

MTU04-I is a sampling port located immediately prior to MTU04, which is currently operating in the TFE Southeast area.

MTU04-E is a sampling port located immediately after MTU04, which is currently operating in the TFE Southeast area.

MTU04 receiving water is routinely sampled at the TFC-R003 location.

MTU05-I is a sampling port located immediately prior to MTU05, which is currently operating in the TFE West area.

MTU05-E is a sampling port located immediately after MTU05, which is currently operating in the TFE West area.

MTU05 receiving water is routinely sampled at the TFC-R003 location.

Explanation of Abbreviations

MTU1-I is a sampling port located immediately prior to MTU1, which is currently operating in the TFC East area.

MTU1-E is a sampling port located immediately after MTU1, which is currently operating in the TFC East area.

MTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU1-I is a sampling port located immediately prior to PTU-1, which is currently operating in the TFC Southeast area.

PTU1-E is a sampling port located immediately after PTU-1, which is currently operating in the TFC Southeast area.

PTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU2-I is a sampling port located immediately prior to PTU-2, which is currently operating in the TFD South area.

PTU2-E is a sampling port located immediately after PTU-2, which is currently operating in the TFD South area.

PTU2 receiving water is routinely sampled at TFC-R003 during the wet season.

PTU3-I is a sampling port located immediately prior to PTU-3, which is currently operating in the TFE East area.

PTU3-E is a sampling port located immediately after PTU-3, which is currently operating in the TFE East area.

PTU3 receiving water is routinely sampled at the TFC-R003 location.

PTU5-I is a sampling port located immediately prior to PTU-5, which is currently operating in the TF406 extraction location.

PTU5-E is a sampling port located immediately after PTU-5, which is currently operating in the TF406 extraction location.

PTU5 receiving water is routinely sampled at the TFC-R003 location.

PTU6-I is a sampling port located immediately prior to PTU-6, which is currently operating in the TFD West area.

PTU6-E is a sampling port located immediately after PTU-6, which is currently operating in the TFD West area.

PTU6 receiving water is routinely sampled at the TFC-R003 location.

PTU8-I is a sampling port located immediately prior to PTU-8, which is currently operating in the TFD East area.

PTU8-E is a sampling port located immediately after PTU-8, which is currently operating in the TFD East area.

PTU8 receiving water is routinely sampled at the TFC-R003 location.

PTU9-I is a sampling port located immediately prior to PTU-9, which is currently operating in the TFE Northwest area.

PTU9-E is a sampling port located immediately after PTU-9, which is currently operating in the TFE Northwest area.

PTU9 receiving water is routinely sampled at the TFC-R003 location.

PTU10-I is a sampling port located immediately prior to PTU-10, which is currently operating in the TFD Helipad area.

PTU10-E is a sampling port located immediately after PTU-10, which is currently operating in the TFD Helipad area.

PTU10 receiving water is routinely sampled at the TFC-R003 location.

PTU11-I is a sampling port located immediately prior to PTU-11, which is currently operating in the TFD Southeast area.

PTU11-E is a sampling port located immediately after PTU-11, which is currently operating in the TFD Southeast area.

PTU11 receiving water is routinely sampled at the TFC-R003 location.

PTU12-I is a sampling port located immediately prior to PTU-12, which is currently operating in the TFD Southshore area.

PTU12-E is a sampling port located immediately after PTU-12, which is currently operating in the TFD Southshore area.

PTU12 receiving water is routinely sampled at the TFC-R003 location.

STU06-I is a sampling port located immediately prior to STU06, which is operating in the TFA East area.

STU06-E is a sampling port located immediately after STU06, which is operating in the TFA East area.

STU06 receiving water is routinely sampled at the TFG-ASW location.

STU09-I is a sampling port located immediately prior to STU09, which is currently operating in the TF518-North area.

STU09-E is a sampling port located immediately after STU09, which is currently operating in the TF518-North area.

STU09 receiving water is routinely sampled at the TFC-R003 location.

Attachment B

Self-Monitoring Reports

Self-Monitoring Report

LLNL Treatment Facility A (TFA)

AREA TFA

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 693

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-08-2009
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 18.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-408	1,148,800	28.0
W-109	1,338,000	32.6
W-457	293,500	6.9
W-522	0	0.0
W-614	418,900	10.2
W-712	323,500	7.8
W-714	320,300	7.5
W-904	0	0.0
W-415	1,684,400	39.8
W-518	0	0.0
W-903	0	0.0
W-605	360,500	8.8
W-262	0	0.0
W-1004	475,400	11.7
W-1009	890,100	21.5
W-1001	0	0.0
Total:	<u>7,253,400</u>	<u>174.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>3,626,700</u>

Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA

Arroyo Seco

TFG-ASW

3,626,700

6. Comments:

Facility down on 10-11-09 due to low air flow. Restarted on 10-13-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-30-2009

Self-Monitoring Report

LLNL Treatment Facility A (TFA)

AREA TFA

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
 November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 704

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-02-2009
 Influent pH: 7.5
 Effluent pH: 7.5
 Effluent Temperature (°C): 20

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-408	1,157,600	28.0
W-109	1,343,300	32.5
W-457	280,600	7.1
W-522	0	0.0
W-614	425,800	10.2
W-712	325,700	8.0
W-714	329,500	8.0
W-904	0	0.0
W-415	1,723,400	40.9
W-518	0	0.0
W-903	0	0.0
W-605	365,900	8.7
W-262	0	0.0
W-1004	483,300	11.5
W-1009	911,600	21.9
W-1001	25,100	3.0
Total:	<u>7,371,800</u>	<u>179.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>3,685,900</u>

Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA

Arroyo Seco

TFG-ASW

3,685,900

6. Comments:

New pump installed in W-1001 on 11-3-09. Failed pump replaced in W-904 on 11-6-09. System down on 11-15-09 due to Snap I/O fault. Restarted on 11-17-09. W-1001 started on 11-24-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Shu Kawaguchi Date: 11-30-2009

Self-Monitoring Report

LLNL Treatment Facility A (TFA)

AREA TFA

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 656

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2009

Influent pH: 7.5

Effluent pH: 7.5

Effluent Temperature (°C): 18.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-408	974,200	27.6
W-109	1,206,800	32.2
W-457	262,500	6.6
W-522	0	0.0
W-614	393,100	10.1
W-712	298,500	7.9
W-904	852,000	30.0
W-415	1,545,200	40.0
W-518	0	0.0
W-903	0	0.0
W-605	342,600	8.9
W-262	0	0.0
W-1004	448,400	11.6
W-1009	873,300	22.2
W-1001	150,000	5.7
W-714	308,800	8.1
Total:	<u>7,655,400</u>	<u>210.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>3,827,700</u>

Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA

Arroyo Seco

TFG-ASW

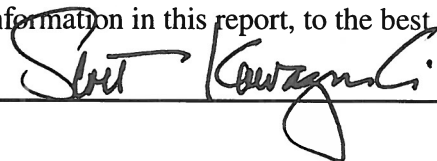
3,827,700

6. Comments:

Facility down on 12-11-09 due to I/O fault. Restarted on 12-14-09. Facility down on 12-16-09 due to leak fault. Restarted on 12-16-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: _____



Date: 12-30-2009

Self-Monitoring Report
LLNL Solar Treatment Unit 06 (STU06)
AREA TFA-E

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 553

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-08-2009
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 17.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	43,855	1.4
Total:	<u>43,855</u>	<u>1.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>43,855</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Karaguzi Date: 10-30-2009

Self-Monitoring Report
LLNL Solar Treatment Unit 06 (STU06)
AREA TFA-E

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 523

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-03-2009
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 20.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	43,685	1.3
Total:	<u>43,685</u>	<u>1.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>43,685</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Karaguna Date: 11-30-2009

Self-Monitoring Report
LLNL Solar Treatment Unit 06 (STU06)
AREA TFA-E

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 172

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-02-2009
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 13.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	18,734	1.3
Total:	<u>18,734</u>	<u>1.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>18,734</u>

6. Comments:

Facility down on 12-7-09 due to pump failure. Two pumps installed in W-254 and facility started on 12-22-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-30-2009

**Self-Monitoring Report
LLNL Treatment Facility B (TFB)
AREA TFB**

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 641

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-08-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 18.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	218,600	5.7
W-621	247,100	6.2
W-620	196,300	5.1
W-610	231,400	6.2
W-704	647,800	17.1
W-655	330,000	8.6
W-1423	212,500	5.3
Total:	<u>2,083,700</u>	<u>54.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,083,700</u>

6. Comments:

Facility down on 10-17-09 due to low air flow. Restarted on 10-20-09. Facility secured on 10-21-09 for air flow measurement system maintenance. Restarted on 10-22-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-30-2009

**Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month October Year 2009

2. Date compliance sampling performed 10-08-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>13.4</u>
6-day total precipitation (in):	<u>.06</u>
Average wind speed/direction (mph):	<u>5/ S</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-30-2009

**Self-Monitoring Report
LLNL Treatment Facility B (TFB)
AREA TFB**

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 734

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-02-2009
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 20.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	261,900	6.0
W-621	301,000	7.0
W-620	235,600	5.5
W-610	277,600	6.5
W-704	772,200	17.8
W-655	360,200	9.0
W-1423	276,000	6.1
Total:	<u>2,484,500</u>	<u>57.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,484,500</u>

6. Comments:

Facility down on 11-10-09 due to low air stripper flow. Facility restarted on 11-11-09. Hexavalent chromium treatment through ion exchange columns for wet season started on 11-30-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawamura Date: 11-30-2009

**Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month November Year 2009

2. Date compliance sampling performed 11-02-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>13.9</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>4/ SE</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-30-2009

Self-Monitoring Report
LLNL Treatment Facility B (TFB)
AREA TFB

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 19.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	258,000	6.1
W-621	297,700	6.8
W-620	234,500	5.4
W-610	277,700	6.4
W-704	745,700	17.9
W-655	386,500	9.4
W-1423	213,400	4.8
Total:	<u>2,413,500</u>	<u>56.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,413,500</u>

6. Comments:

Level transducer replaced in W-704 on 12-4-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-30-2009

**Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month December Year 2009

2. Date compliance sampling performed 12-01-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>10.4</u>
6-day total precipitation (in):	<u>.1</u>
Average wind speed/direction (mph):	<u>5/ SE</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-30-2009

Operator Signature: Shelley K. Rogers Date: **10-30-2009**

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month October Year 2009

2. Date compliance sampling performed 10-12-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>14</u>
6-day total precipitation (in):	<u>.06</u>
Average wind speed/direction (mph):	<u>4/ SW</u>

4. Receiving Data:

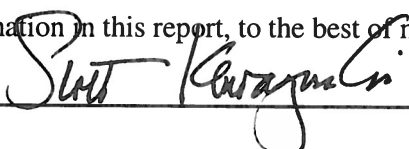
Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-30-2009

**Self-Monitoring Report
LLNL Treatment Facility C (TFC)
AREA TFC**

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-02-2009
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 20.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	590,678	13.2
W-1015	296,563	6.9
W-1116	76,080	1.7
W-1103	217,018	4.5
W-1102	0	0.0
W-1104	1,113,615	25.0
Total:	<u>2,293,954</u>	<u>51.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>2,293,954</u>

6. Comments:

Facility secured on 11-30-09 for facility upgrades.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Date: 11-30-2009

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month November Year 2009

2. Date compliance sampling performed 11-02-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>13.9</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>4/ SE</u>

4. Receiving Data:

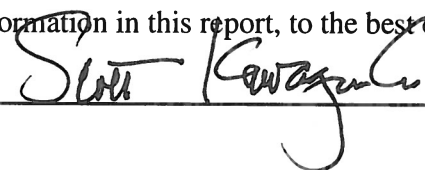
Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-30-2009

**Self-Monitoring Report
LLNL Treatment Facility C (TFC)
AREA TFC**

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	0	0.0
W-1015	0	0.0
W-1116	0	0.0
W-1103	0	0.0
W-1102	0	0.0
W-1104	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

Facility down for mechanical and electronic upgrades.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kuzay Date: 12-29-2009

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month December Year 2009

2. Date compliance sampling performed 12-01-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>10.4</u>
6-day total precipitation (in):	<u>.1</u>
Average wind speed/direction (mph):	<u>5/ SE</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-30-2009

Operator Signature: *[Signature]* Date: **10-29-2009**

Operator Signature: *Ant Vandy* Date: 11-30-2009

Self-Monitoring Report
LLNL Mini Treatment Unit 1 (MTU1)
AREA TFC-E

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **12-03-2009**
Influent pH: **6.5**
Effluent pH: **7.5**
Effluent Temperature (°C): **19.7**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-413	758,927	17.5
W-368	248,014	5.7
Total:	<u>1,006,941</u>	<u>23.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,006,941</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-11-2010**

Self-Monitoring Report
LLNL Portable Treatment Unit 1 (PTU1)
AREA TFC-SE

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-12-2009
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 19.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	390,406	9.1
W-2201	537,425	12.3
Total:	<u>927,831</u>	<u>21.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>927,831</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-30-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 1 (PTU1)
AREA TFC-SE

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): **5**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-02-2009**
Influent pH: **7.0**
Effluent pH: **7.5**
Effluent Temperature (°C): **21.2**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	333,881	9.0
W-2201	507,819	12.4
Total:	<u>841,700</u>	<u>21.4</u>

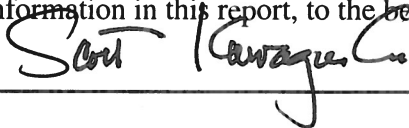
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>841,700</u>

6. Comments:

System went down on 11-20-09 due to Power Up fault. Restarted on 11-23-09.
Ion exchange columns for wet season hexavalent chromium treatment placed into service on 11-30-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-30-2009**

Self-Monitoring Report
LLNL Portable Treatment Unit 1 (PTU1)
AREA TFC-SE

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 19.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	346,519	8.0
W-2201	523,277	12.3
Total:	<u>869,796</u>	<u>20.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>869,796</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Cavazos Date: 12-30-2009

Self-Monitoring Report
LLNL Treatment Facility D (TFD)
AREA TFD

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-03-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 21.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-906	75,400	2.9
W-907-2	0	0.0
W-351	47,300	1.3
W-653	8,500	0.1
W-1206	216,700	5.6
W-1208	592,100	13.4
W-2011	0	0.0
W-2101	20,400	0.4
W-2102	0	0.0
Total:	<u>960,400</u>	<u>23.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>960,400</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve K. Caragana Date: 11-30-2009

**Self-Monitoring Report
LLNL Treatment Facility D (TFD)
AREA TFD**

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 728

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-03-2009
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 19.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-906	184,000	4.7
W-907-2	0	0.0
W-351	40,000	0.9
W-653	8,100	0.1
W-1206	202,200	11.5
W-1208	992,600	23.8
W-2011	0	0.0
W-2101	19,300	0.4
W-2102	0	0.0
Total:	<u>1,446,200</u>	<u>41.4</u>

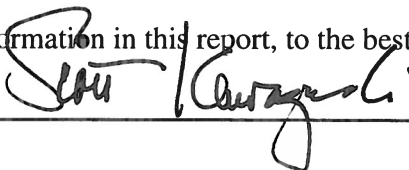
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,446,200</u>

6. Comments:

W-1206 was down from 12-14-09 to the end of the month due to a low flow fault.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

Self-Monitoring Report

LLNL Portable Treatment Unit 8 (PTU8)

AREA TFD-E

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** 03 04 **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): **623**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **10-09-2009**
 Influent pH: **7.5**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **19.1**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1253	0	0.0
W-1255	0	0.0
W-1301	33,200	0.8
W-1404	0	0.0
W-1550	80,400	2.2
W-1307	231,200	6.2
W-1306	9,100	0.3
W-1303	0	0.0
W-2006	0	0.0
W-2203	0	0.0
Total:	<u>353,900</u>	<u>9.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>353,900</u>

6. Comments:

Facility secured on 10-2-09 for electronic upgrade. Restarted on 10-5-09. Facility down on 10-19-09 due to low flow fault. Restarted on 10-20-09. Facility down on 10-26-09 due to low flow fault. Restarted on 10-27-09. Facility hours estimated from logbook.

Self-Monitoring Report (cont'd)
LLNL Portable Treatment Unit 8 (PTU8)
AREA TFD-E

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-30-2009

Self-Monitoring Report

LLNL Portable Treatment Unit 8 (PTU8)

AREA TFD-E

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
 November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 482

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-03-2009
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 21.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1253	0	0.0
W-1255	0	0.0
W-1301	29,800	0.9
W-1404	0	0.0
W-1550	43,300	2.1
W-1307	190,400	6.3
W-1306	4,800	0.2
W-1303	0	0.0
W-2006	100	0.0
W-2203	0	0.0
Total:	<u>268,400</u>	<u>9.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>268,400</u>

6. Comments:

Facility hours estimated from logbook. Facility down on 11-4-09 for level transducer verification. Restarted on 11-5-09. Facility secured on 11-10-09 for strategy upgrades and to install level transducers in W-1301, W-1404, and W-2006. Restarted on 11-19-09. W-1303 and W-1404 will not start.

Self-Monitoring Report (cont'd)
LLNL Portable Treatment Unit 8 (PTU8)
AREA TFD-E

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 11-30-2009

Self-Monitoring Report

LLNL Portable Treatment Unit 8 (PTU8)

AREA TFD-E

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 636

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-02-2009
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 16.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1253	0	0.0
W-1255	0	0.0
W-1301	37,500	0.8
W-1550	29,500	2.4
W-1307	238,500	6.1
W-1306	7,900	0.3
W-1303	0	0.0
W-2006	400	0.6
W-2203	0	0.0
W-1404	21,100	0.0
Total:	<u>334,900</u>	<u>10.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>334,900</u>

6. Comments:

Facility down on 12-11-09 due to low flow. Restarted on 12-14-09. Facility down on 12-14-09 due to I/O fault. Restarted on 12-15-09. W-1550 down from 12-15-09 to the end of the month awaiting transducer replacement. W-2006 down on 12-21-09 due to low flow.

Self-Monitoring Report (cont'd)
LLNL Portable Treatment Unit 8 (PTU8)
AREA TFD-E

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 01-04-2010

Self-Monitoring Report
LLNL Portable Treatment Unit 10 (PTU10)
AREA TFD-HPD

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): **720**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **10-07-2009**
Influent pH: **7.4**
Effluent pH: **7.5**
Effluent Temperature (°C): **18.1**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1254	558,156	10.0
W-1653	0	0.0
W-1657	0	0.0
W-1654	0	0.0
W-1655	0	0.0
W-1551	0	0.0
W-1650	0	0.0
W-1652	0	0.0
W-1552	0	0.0
W-1651	0	0.0
W-1656	0	0.0
Total:	<u>558,156</u>	<u>10.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>558,156</u>

6. Comments:

The facility was shutdown at 923 on 10-30-09 as requested by Ben Johnson to assist LLNL wildlife biologist in Red Legged Frog project.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Portable Treatment Unit 10 (PTU10)
AREA TFD-HPD

Operator Signature: Billy V. Field J Date: 11-12-2009

AREA TFD-HPD

The facility was shut down on 10-30 and was restarted on 11-06 to assist in the Red Legged Frog Project. The facility shut down several times due to low flow (11-11).The facility was shut down on 11-19 in order to change out W-1254 flow

Self-Monitoring Report (cont'd)
LLNL Portable Treatment Unit 10 (PTU10)
AREA TFD-HPD

meter. The facility was restarted on 11-20. The end month cumulative volume has been recalculated to account for an error that existed when the new flow meter (W-1254) was installed.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy O. Kish Date: 12-02-2009

Self-Monitoring Report

LLNL Portable Treatment Unit 10 (PTU10)

AREA TFD-HPD

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): ==

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **12-10-2009**
 Influent pH: **7.3**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **16.6**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1552	0	0.0
W-1651	0	0.0
W-1656	0	0.0
W-1254	640,095	15.0
W-1653	0	0.0
W-1657	0	0.0
W-1654	0	0.0
W-1655	0	0.0
W-1551	0	0.0
W-1650	0	0.0
W-1652	0	0.0
Total:	<u>640,095</u>	<u>15.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>640,095</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Portable Treatment Unit 10 (PTU10)
AREA TFD-HPD

Operator Signature: Billy J. Kidd Jr Date: 01-12-2010

Self-Monitoring Report
LLNL Portable Treatment Unit 2 (PTU2)
AREA TFD-S

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 727

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-15-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 22.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	801,824	18.5
W-1510	0	0.0
W-1504	369,078	8.5
Total:	<u>1,170,902</u>	<u>27.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,170,902</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-02-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 2 (PTU2)
AREA TFD-S

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 753

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-16-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 21.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	831,040	18.5
W-1510	0	0.0
W-1504	378,322	8.4
Total:	<u>1,209,362</u>	<u>26.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,209,362</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 2 (PTU2)
AREA TFD-S

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-21-2009
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	470,656	0.0
W-1510	202,591	16.1
W-1504	166,999	0.0
Total:	<u>840,246</u>	<u>16.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>840,246</u>

6. Comments:

12/15/09 to 12/28/09 system operated according to the TFD-S Extraction Well
Field Start Up Plan.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

Self-Monitoring Report
LLNL Portable Treatment Unit 11 (PTU11)
AREA TFD-SE

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 727

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-09-2009

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 18.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	0	0.0
W-1308	100,490	2.3
W-1904	0	0.0
W-1403	288,385	6.8
W-2005	61,394	1.3
SIP-ETC-201	0	0.0
Total:	<u>450,269</u>	<u>10.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>450,269</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kowzen Date: 10-30-2009

Self-Monitoring Report

LLNL Portable Treatment Unit 11 (PTU11)

AREA TFD-SE

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October	<u>31</u>																				
November	01	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	06	07	08	09	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>						
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	26	27	28	29	30						

Total monthly time facility operated (hours): 416

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>11-05-2009</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>19.3</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	0	0.0
W-1308	65,189	2.3
W-1904	0	0.0
W-1403	160,438	6.5
W-2005	40,806	3.5
SIP-ETC-201	0	0.0
Total:	<u>266,433</u>	<u>12.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>266,433</u>

6. Comments:

Facility shutdown 10/31/09 @ 12:41 hrs due to facility low flow. Facility was restarted 11/02/09. Facility was secured 11/05/09 to replace W-2005 bubbler system with electronic level transducer. Facility was restarted 11/10/09. Facility shutdown 11/25/09 due to I/O communications error. Facility was restarted 11/30/09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Portable Treatment Unit 11 (PTU11)
AREA TFD-SE

Operator Signature:  Date: 12-02-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 11 (PTU11)
AREA TFD-SE

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-03-2009
Influent pH: 6.5
Effluent pH: 7.0
Effluent Temperature (°C): 17.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	0	0.0
W-1308	85,157	2.5
W-1904	0	0.0
W-1403	125,996	6.3
W-2005	25,063	2.3
SIP-ETC-201	0	0.0
Total:	<u>236,216</u>	<u>11.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>236,216</u>

6. Comments:

12/01/09-Found facility shutdown due to DPLC-E watchdog timer failure. Timer was replaced and facility restarted 12/2/09. 12/15/09-Found facility shutdown on low facility flow rate caused by the failure of w-1403 groundwater pump. Facility low flow interlock was reset and facility restarted 12/21/09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 01-05-2010

Self-Monitoring Report
LLNL Portable Treatment Unit 12 (PTU12)
AREA TFD-SS

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 727

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-12-2009
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 21.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	320,711	7.3
W-1603	0	0.0
W-1602	215,145	4.9
W-1601	54,436	1.2
Total:	<u>590,292</u>	<u>13.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>590,292</u>

6. Comments:

Well pump removed from W-1603 on 10/23/09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-02-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 12 (PTU12)
AREA TFD-SS

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 747

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-16-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 20.2

4. Wellfield Data:

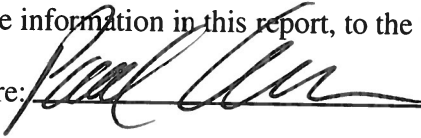
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	324,704	7.2
W-1603	0	0.0
W-1602	217,752	4.9
W-1601	54,879	1.2
Total:	<u>597,335</u>	<u>13.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>597,335</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 12 (PTU12)
AREA TFD-SS

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 726

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-21-2009

Influent pH: 7.5

Effluent pH: 7.0

Effluent Temperature (°C): 20.1

4. Wellfield Data:

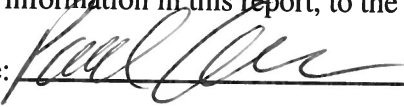
<u>Source</u>	<u>Monthly</u> <u>Volume(gal)</u>	<u>Instantaneous</u> <u>Flow Rate(gpm)</u>
W-1523	313,473	7.4
W-1603	0	0.0
W-1602	209,456	4.7
W-1601	52,083	1.2
Total:	<u>575,012</u>	<u>13.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving</u> <u>Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>575,012</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

Self-Monitoring Report
LLNL Portable Treatment Unit 6 (PTU6)
AREA TFD-W

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** 03 04 **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 17 18 19 **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 514

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-01-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 22.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1216	293,197	9.9
W-1215	0	0.0
W-1902	0	0.0
Total:	<u>293,197</u>	<u>9.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>293,197</u>

6. Comments:

System secure from 10/2/09 to 10/5/09 and 10/16/09 to 10/20/09 due to erroneous leak alarm.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-03-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 6 (PTU6)
AREA TFD-W

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 528

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-18-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 20.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1216	284,990	8.9
W-1215	0	0.0
W-1902	0	0.0
Total:	<u>284,990</u>	<u>8.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>284,990</u>

6. Comments:

System secure from 11/2/09 to 11/6/09 to support the invasive species control efforts. System secure from 11/20/09 to 11/23/09 and 11/28/09 to 11/30/09 due to recurring high sump alarm.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature  Date: 02-03-2010

Self-Monitoring Report
LLNL Portable Treatment Unit 6 (PTU6)
AREA TFD-W

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 **02** 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 **23** 24 25 26 27 28 **29** **30**

Total monthly time facility operated (hours): **25**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **12-23-2009**
Influent pH: **7.0**
Effluent pH: **7.5**
Effluent Temperature (°C): **19.4**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1216	1,992	0.0
W-1215	0	0.0
W-1902	17,965	13.2
Total:	<u>19,957</u>	<u>13.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>19,957</u>

6. Comments:

System secure 12/1/09, 12/2/09 to 12/23/09, 12/23/09 to 12/29/09 and 12/30/09
due to recurring air stripper high water alarm trouble shooting.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-03-2010**

Self-Monitoring Report

LLNL Vapor Extraction System 11 (VES11)

AREA VTFD-ETCS

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

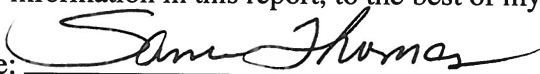
3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2004A	245,059	5.8	-5.04	56	705
W-ETC-2003	644,406	15.1	-1.24	56	705
W-ETC-2004B	235,207	5.2	-5.47	56	705
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>1,124,672</u>	<u>26.1</u>			

4. Comments:

Quarterly tedlar bag vapor samples collected at SVE wells 10/26/09.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-03-2009

Self-Monitoring Report

LLNL Vapor Extraction System 11 (VES11)

AREA VTFD-ETCS

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October	<u>30</u>	<u>31</u>																		
November	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	14	15					
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>					

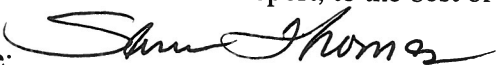
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1904	0	0.0	0	0	672
W-ETC-2004A	226,501	5.7	-5.22	58	672
W-ETC-2003	602,869	15.2	-1.25	58	672
W-ETC-2004B	235,497	5.7	-4.97	58	672
SIP-ETC-201	0	0.0	0	0	672
Total:	<u>1,064,867</u>	<u>26.6</u>			

4. Comments:

Facility hours of operation and SVE well month end cumulative volumes adjusted to reflect actual volumes extracted and hours operated. Correction necessary due to totalizers indicating flow and accumulating while facility was offline. Facility shutdown 11/09/09 @ 6:00 pm due to scheduled power outage. Facility was restarted 11/10/09 @ 11:20 am. Facility was found shutdown 11/13/09 @ 11:20 am due to main power breaker trip. Facility was restarted 11/16/09 @ 10:40 am.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2009

Self-Monitoring Report

LLNL Vapor Extraction System 11 (VES11)

AREA VTFD-ETCS

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treatment facility operated

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2004A	194,909	5.7	-5.7	50	582
W-ETC-2003	514,537	15.2	-1.28	50	598
W-ETC-2004B	228,007	5.1	-3.77	50	598
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>937,453</u>	<u>26.0</u>			

4. Comments:

Facility and well field totalizers were set to zero 12/03/09. Volumes accumulated after November month end readings were recorded are reflected in this report.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature. San Thomas Date: 01-05-2010

Self-Monitoring Report

LLNL Vapor Extraction System 07 (VES07)

AREA VTFD-HPD

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1651	0	0.0	0	0	0
W-1653	0	0.0	0	0	0
W-1657	0	0.0	0	0	0
W-1654	0	0.0	0	0	0
W-1652	0	0.0	0	0	0
W-1552	0	0.0	0	0	0
W-1655	0	0.0	0	0	0
W-1656	0	0.0	0	0	0
W-1650	0	0.0	0	0	0
W-HPA-002A	762,954	17.6	-23.9	70	726
W-HPA-002B	0	0.0	0	0	0
Total:	<u>762,954</u>	<u>17.6</u>			

4. Comments:

NA

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty O. Kiehl Date: 11-12-2009

Self-Monitoring Report

LLNL Vapor Extraction System 07 (VES07)

AREA VTFD-HPD

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October 31
 November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1651	0	0.0	0	0	0
W-1653	0	0.0	0	0	0
W-1657	0	0.0	0	0	0
W-1654	0	0.0	0	0	0
W-1652	0	0.0	0	0	0
W-1552	0	0.0	0	0	0
W-1655	0	0.0	0	0	0
W-1656	0	0.0	0	0	0
W-1650	0	0.0	0	0	0
W-HPA-002A	785,101	17.7	-24	70	749
W-HPA-002B	0	0.0	0	0	0
Total:	<u>785,101</u>	<u>17.7</u>			

4. Comments:
NA

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy J. Kilduff Date: 12-02-2009

Self-Monitoring Report

LLNL Vapor Extraction System 07 (VES07)

AREA VTFD-HPD

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treatment facility operated

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1651	0	0.0	0	0	0
W-1653	0	0.0	0	0	0
W-1657	0	0.0	0	0	0
W-1654	0	0.0	0	0	0
W-1652	0	0.0	0	0	0
W-1552	0	0.0	0	0	0
W-1655	0	0.0	0	0	0
W-1656	0	0.0	0	0	0
W-1650	0	0.0	0	0	0
W-HPA-002A	571,146	17.0	-24	62	557
W-HPA-002B	0	0.0	0	0	0
Total:	<u>571,146</u>	<u>17.0</u>			

4. Comments:

There was a period of time when the facility ran but there was no vapor flow due to frozen vapor lines. The facility was down for 5 days to complete changeout of the 4 vapor GACs which included making up new hose lines with fittings.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty O. Kralik Date: 01-12-2010

Self-Monitoring Report

LLNL Vapor Extraction System 13 (VES13)

AREA VTFD-HS

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

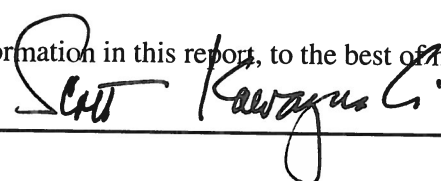
3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-653	9,670	0.2	-26.2	65	636
W-2011	0	0.0	0	0	0
W-2101	3,544	0.1	-26.2	65	636
W-2102	0	0.0	0	0	0
Total:	<u>13,214</u>	<u>0.3</u>			

4. Comments:

System went down on 10-17-09 due to high discharge separator level. Restarted on 10-19-09.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-30-2009

Self-Monitoring Report

LLNL Vapor Extraction System 13 (VES13)

AREA VTFD-HS

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October 31
 November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-653	8,400	0.2	-26.4	63	688
W-2011	0	0.0	0	0	0
W-2101	3,738	0.1	-26.4	63	688
W-2102	0	0.0	0	0	0
Total:	<u>12,138</u>	<u>0.2</u>			

4. Comments:

Facility down on 11-7-09 due to high discharge separator level. Facility restarted on 11-9-09.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 11-30-2009

Self-Monitoring Report
LLNL Vapor Extraction System 13 (VES13)
AREA VTFD-HS

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treatment facility operated

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-653	7,658	0.2	-26.9	64	717
W-2011	0	0.0	0	0	0
W-2101	3,125	0.1	-26.9	64	717
W-2102	0	0.0	0	0	0
Total:	<u>10,783</u>	<u>0.3</u>			

4. Comments:

Well flow accumulators not functioning since 12-6-09. Flows estimated on assumption that W-653 accumulating 250 cu. ft./day and W-2101 accumulating 100 cu. ft./day.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-30-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 3 (PTU3)
AREA TFE-E

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 674

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-15-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 23.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	307,322	7.7
W-1109	80,546	2.1
W-1903	0	0.0
W-1909	0	0.0
W-2305	0	0.0
Total:	<u>387,868</u>	<u>9.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>387,868</u>

6. Comments:

System secured on 10/5,6,7,8, and 9 for several hours each day for discharge pump plumbing repairs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-18-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 3 (PTU3)
AREA TFE-E

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 715

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-17-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 21.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	321,448	7.6
W-1109	95,808	2.2
W-1903	0	0.0
W-1909	0	0.0
W-2305	0	0.0
Total:	<u>417,256</u>	<u>9.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>417,256</u>

6. Comments:

System secure from 10/31/09 to 11/2/09 due to "watch dog" (electronic communication) alarm.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 3 (PTU3)
AREA TFE-E

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 705

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-11-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 21.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	316,491	7.5
W-1109	95,596	2.3
W-1903	0	0.0
W-1909	0	0.0
W-2305	3,134	1.8
Total:	<u>415,221</u>	<u>11.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>415,221</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

Self-Monitoring Report
LLNL GAC Treatment Unit 07 (GTU07)
AREA TFE-HS

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 560

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-22-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 23.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2012	104,271	2.7
W-2105	0	0.0
Total:	<u>104,271</u>	<u>2.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>104,271</u>

6. Comments:

System was down from 10/23/09 to 10/29/09 due to W-2012 well pump controller evaluation. On 10/29/09 & 10/30/09 system was run on "Day Operations" only.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-16-2009

Self-Monitoring Report
LLNL GAC Treatment Unit 07 (GTU07)
AREA TFE-HS

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 444

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-17-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 22.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2012	70,905	2.6
W-2105	0	0.0
Total:	<u>70,905</u>	<u>2.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>70,905</u>

6. Comments:

From 10/30/09 to 11/5/09 system operated manned/day hours only to evaluate well pump in W-2012. System secure from 11/25/09 through 11/30/09 due to well pump in W-2012 not being operational.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2009

Self-Monitoring Report
LLNL GAC Treatment Unit 07 (GTU07)
AREA TFE-HS

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 87

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-11-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 21.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2012	13,647	2.5
W-2105	0	0.0
Total:	<u>13,647</u>	<u>2.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>13,647</u>

6. Comments:

All of system downtime was due to evaluation of the well pump and pump controller for W-2012. System secure pending well pump and controller replacement.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

Self-Monitoring Report
LLNL Portable Treatment Unit 9 (PTU9)
AREA TFE-NW

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 729

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-15-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 23.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	687,764	16.0
W-1409	0	0.0
Total:	<u>687,764</u>	<u>16.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>687,764</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-02-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 9 (PTU9)
AREA TFE-NW

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 658

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-18-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 21.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	645,947	16.7
W-1409	0	0.0
Total:	<u>645,947</u>	<u>16.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>645,947</u>

6. Comments:

System secure from 11/2/09 to 11/6/09 to support the invasive species control efforts.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 9 (PTU9)
AREA TFE-NW

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 729

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-18-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 22

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	718,653	16.6
W-1409	0	0.0
Total:	<u>718,653</u>	<u>16.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>718,653</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

Self-Monitoring Report
LLNL Mini Treatment Unit 04 (MTU04)
AREA TFE-SE

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 323

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-28-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 19.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	158,139	8.2
Total:	<u>158,139</u>	<u>8.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>158,139</u>

6. Comments:

System secure from 10/14/09 to 10/28/09 due to well pump failure. System secure from 10/28/09 to 10/30/09 for water level transducer calibration and electronic maintenance.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: San Huma Date: 11-02-2009

Self-Monitoring Report
LLNL Mini Treatment Unit 04 (MTU04)
AREA TFE-SE

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): **667**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-05-2009**
Influent pH: **6.5**
Effluent pH: **7.0**
Effluent Temperature (°C): **21.2**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	330,400	8.2
Total:	<u>330,400</u>	<u>8.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>330,400</u>

6. Comments:

Facility was offline 10/31 and 11/01 for well level transducer maintenance.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-03-2009**

Self-Monitoring Report
LLNL Mini Treatment Unit 04 (MTU04)
AREA TFE-SE

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): **716**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **12-03-2009**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **17.5**

4. Wellfield Data:


<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	353,577	8.2
Total:	<u>353,577</u>	<u>8.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>353,577</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-07-2010**

Self-Monitoring Report
LLNL Mini Treatment Unit 03 (MTU03)
AREA TFE-SW

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 694

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-05-2009
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1520	2	0.0
W-1518	68,436	1.7
W-1522	86	0.0
Total:	<u>68,524</u>	<u>1.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>68,524</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-29-2009

Operator Signature: Bell V. Kuhl Date: **12-02-2009**

Self-Monitoring Report
LLNL Mini Treatment Unit 03 (MTU03)
AREA TFE-SW

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **691**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **12-10-2009**

Influent pH: **7.5**

Effluent pH: **7.5**

Effluent Temperature (°C): **14.5**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1520	0	0.0
W-1518	74,313	1.8
W-1522	0	0.0
Total:	<u>74,313</u>	<u>1.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>74,313</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-12-2010**

Self-Monitoring Report
LLNL Mini Treatment Unit 05 (MTU05)
AREA TFE-W

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 693

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-05-2009
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 20.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-305	369,346	8.8
W-292	248,485	5.9
Total:	<u>617,831</u>	<u>14.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>617,831</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-29-2009

Self-Monitoring Report
LLNL Mini Treatment Unit 05 (MTU05)
AREA TFE-W

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October	<u>30</u>	<u>31</u>													
November	<u>01</u>	<u>02</u>	03	04	05	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	10	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 570

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>11-17-2009</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>20.5</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-305	303,740	8.9
W-292	205,235	6.0
Total:	<u>508,975</u>	<u>14.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>508,975</u>

6. Comments:

The facility was shut down on 11-2 for Arroyo Bullfrog Maintenance and restarted on 11-6. The facility was shutdown on 11-9 for electrical conduit repair and restarted on 11-11. The facility was shut down on 11-18 for changeout of both GACs. Debris was cleaned from the skid and the supply and injection line of the LMI pump were replaced. The facility was restarted on 11-19.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy O. Kistner Date: 12-02-2009

Self-Monitoring Report
LLNL Mini Treatment Unit 05 (MTU05)
AREA TFE-W

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 691

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-10-2009

Influent pH: 7.1

Effluent pH: 7.5

Effluent Temperature (°C): 16.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-305	369,295	8.8
W-292	249,621	6.0
Total:	<u>618,916</u>	<u>14.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>618,916</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy O. Kuhl Date: 01-12-2010

Self-Monitoring Report

LLNL Vapor Extraction System 16 (VES16)

AREA VTFE-ELM

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1909	0	0.0	0	0	0
W-1903	0	0.0	0	0	0
W-2305	0	0.0	0	0	0
W-543-001	0	0.0	0	0	0
W-543-003	630,756	14.9	-.86	52	692
W-543-1908	0	0.0	0	0	0
Total:	<u>630,756</u>	<u>14.9</u>			

4. Comments:

Quarterly vapor samples collected 10/26/09 and submitted to Caltest Labs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-04-2009

Self-Monitoring Report

LLNL Vapor Extraction System 16 (VES16)

AREA VTFE-ELM

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October	<u>30</u>	<u>31</u>																								
November	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>											
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>											

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1909	0	0.0	0	0	0
W-1903	0	0.0	0	0	0
W-2305	0	0.0	0	0	0
W-543-001	0	0.0	0	0	0
W-543-003	728,438	15.2	-1.14	53	768
W-543-1908	0	0.0	0	0	0
Total:	<u>728,438</u>	<u>15.2</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2009

Self-Monitoring Report

LLNL Vapor Extraction System 16 (VES16)

AREA VTFE-ELM

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treatment facility operated

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1909	0	0.0	0	0	0
W-1903	0	0.0	0	0	0
W-2305	0	0.0	0	0	0
W-543-001	0	0.0	0	0	0
W-543-003	558,771	15.4	-1.32	47	718
W-543-1908	0	0.0	0	0	0
Total:	<u>558,771</u>	<u>15.4</u>			

4. Comments:

Facility operated 18 hours during reporting month "deadheaded" to protect unit from freezing. Facility was discovered several days during reporting month operating with no flow due to condensate accumulating in extraction lines, restricting vapor flow.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-12-2010

Self-Monitoring Report

LLNL Vapor Extraction System 12 (VES12)

AREA VTFE-HS

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-2010B	0	0.0	0	0	0
W-ETS-2010A	436,349	10.4	-.39	66	727
W-ETS-2009	0	0.0	0	0	0
W-ETS-2008A	446,326	10.6	-1.8	66	727
W-ETS-2008B	375,857	8.7	-10.07	66	727
W-2105	0	0.0	0	0	0
Total:	<u>1,258,532</u>	<u>29.7</u>			

4. Comments:

Quarterly vapor samples collected and submitted to Caltest Labs 10/26/09

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 11-04-2009

Self-Monitoring Report

LLNL Vapor Extraction System 12 (VES12)

AREA VTFE-HS

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October	<u>30</u>	<u>31</u>																				
November	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>							
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>							

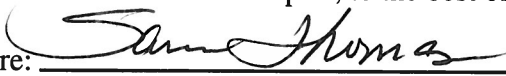
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-2010B	0	0.0	0	0	0
W-ETS-2010A	471,918	10.3	-.41	59	763
W-ETS-2009	0	0.0	0	0	0
W-ETS-2008A	485,648	10.5	-1.64	59	763
W-ETS-2008B	384,347	8.2	-10.47	59	763
W-2105	0	0.0	0	0	0
Total:	<u>1,341,913</u>	<u>29.1</u>			

4. Comments:

Secured facility 11/19 due to scheduled power outage. Facility was restarted
11/20 @ 06:50 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-03-2009

Self-Monitoring Report

LLNL Vapor Extraction System 12 (VES12)

AREA VTFE-HS

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treatment facility operated

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-ETS-2010B	0	0.0	0	0	0
W-ETS-2010A	433,639	10.5	-.56	52	701
W-ETS-2009	0	0.0	0	0	0
W-ETS-2008A	443,918	10.5	-1.71	52	701
W-ETS-2008B	369,488	8.9	-9.44	52	701
W-2105	0	0.0	0	0	0
Total:	<u>1,247,045</u>	<u>29.9</u>			

4. Comments:

Facility operated several days during reporting month in a "no load" condition to protect equipment from freezing temperatures.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-06-2010

Self-Monitoring Report
LLNL GAC Treatment Unit 01 (GTU01)
AREA TFG-1

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 712

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-22-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 20.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	375,313	8.7
Total:	<u>375,313</u>	<u>8.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>375,313</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-02-2009

**Land Observation Report date:
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month October Year 2009

2. Date compliance sampling performed 10-22-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>15.7</u>
6-day total precipitation (in):	<u>.88</u>
Average wind speed/direction (mph):	<u>4/ SSW</u>

4. Receiving Data:

Sample Location	pH	Temperature (C)
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-02-2009

Self-Monitoring Report
LLNL GAC Treatment Unit 01 (GTU01)
AREA TFG-1

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 555

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-16-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 19.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	294,721	8.8
Total:	<u>294,721</u>	<u>8.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>294,721</u>

6. Comments:

System secure from 11/4/09 to 11/12/09 for carbon change and plumbing repairs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2009

**Land Observation Report date:
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month November Year 2009

2. Date compliance sampling performed 11-16-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>9.8</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>2/ SE</u>

4. Receiving Data:

Sample <u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2009

Self-Monitoring Report
LLNL GAC Treatment Unit 01 (GTU01)
AREA TFG-1

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 716

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-18-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 20

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	380,414	8.8
Total:	<u>380,414</u>	<u>8.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>380,414</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

**Land Observation Report date:
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month December Year 2009

2. Date compliance sampling performed 12-18-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>10.1</u>
6-day total precipitation (in):	<u>.27</u>
Average wind speed/direction (mph):	<u>3/ SE</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

Self-Monitoring Report
LLNL Mini Treatment Unit 02 (MTU02)
AREA TFG-N

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 726

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-15-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 22.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1807	200,017	5.0
W-1806	120,679	2.8
Total:	<u>320,696</u>	<u>7.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>320,696</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-02-2009

Self-Monitoring Report
LLNL Mini Treatment Unit 02 (MTU02)
AREA TFG-N

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 693

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-18-2009
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(gal)</u>	<u>Instantaneous</u> <u>Flow Rate(gpm)</u>
W-1807	180,051	4.4
W-1806	110,252	2.6
Total:	<u>290,303</u>	<u>7.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving</u> <u>Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>290,303</u>

6. Comments:

System secure from 11/14/09 to 11/16/09 due to high sump pressure alarm caused by condensate build-up in carbons.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2009

Self-Monitoring Report
LLNL Mini Treatment Unit 02 (MTU02)
AREA TFG-N

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 727

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-18-2009
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 20.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1807	189,151	4.4
W-1806	112,989	2.6
Total:	<u>302,140</u>	<u>7.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>302,140</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

Self-Monitoring Report
LLNL Portable Treatment Unit 5 (PTU5)
AREA TF406

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 704

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-12-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 23.5

4. Wellfield Data:

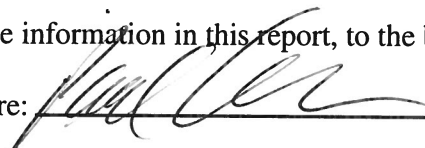
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	237	5.3
W-1310	663,413	15.9
GSW-445	0	0.0
Total:	<u>663,650</u>	<u>21.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>663,650</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-02-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 5 (PTU5)
AREA TF406

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 657

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-16-2009
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 22.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	0	0.0
W-1310	614,470	15.9
GSW-445	0	0.0
Total:	<u>614,470</u>	<u>15.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>614,470</u>

6. Comments:

System secure from 11/2/09 to 11/6/09 to support the invasive species control efforts.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2009

Self-Monitoring Report
LLNL Portable Treatment Unit 5 (PTU5)
AREA TF406

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 727

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-18-2009
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 22.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	0	0.0
W-1310	672,632	15.6
GSW-445	0	0.0
Total:	<u>672,632</u>	<u>15.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>672,632</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

Self-Monitoring Report
LLNL GAC Treatment Unit 03 (GTU03)
AREA TF406-NW

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 642

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-12-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 22.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	187,374	4.8
Total:	<u>187,374</u>	<u>4.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>187,374</u>

6. Comments:

System secure from 10/16/09 to 10/19/09 for electrical power feed work.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-02-2009

Self-Monitoring Report
LLNL GAC Treatment Unit 03 (GTU03)
AREA TF406-NW

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 648

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-16-2009
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 20.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	201,511	5.1
Total:	<u>201,511</u>	<u>5.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>201,511</u>

6. Comments:

System secure from 11/2/09 to 11/6/09 to support the invasive species control efforts.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2009

Self-Monitoring Report
LLNL GAC Treatment Unit 03 (GTU03)
AREA TF406-NW

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 717

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-18-2009

Influent pH: 7.5

Effluent pH: 7.5

Effluent Temperature (°C): 21.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	220,577	5.0
Total:	<u>220,577</u>	<u>5.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>220,577</u>

6. Comments:

On 12/29/09 348 gal. of groundwater processed through system from VTF518PZ.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 11-20-2009

Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October	30	31															
November	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15		
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 11-30-2009

Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

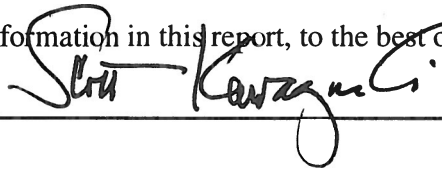
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-29-2009

Self-Monitoring Report
LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)
AREA TF518-PZ

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** 02 03 04 05 **06** 07 08 09 10 11 **12** 13 14 15
 16 17 18 **19** **20** 21 **22** 23 24 25 **26** 27 28 29

Total monthly time facility operated (hours): 2

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

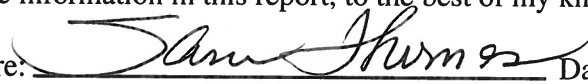
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1615	92	0.0
W-518-1913	0	0.0
W-518-1915	53	0.0
W-518-1914	0	0.0
SVB-518-201	0	0.0
SVB-518-204	0	0.0
Total:	<u>145</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>145</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-04-2009

Self-Monitoring Report
LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)
AREA TF518-PZ

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 30 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 763

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

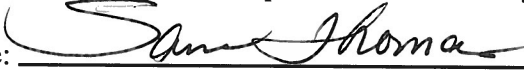
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1615	119	0.0
W-518-1913	0	0.0
W-518-1915	40	0.0
W-518-1914	0	0.0
SVB-518-201	0	0.0
SVB-518-204	0	0.0
Total:	<u>159</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>158.7</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2009

Self-Monitoring Report
LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)
AREA TF518-PZ

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 718

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1615	94	0.0
W-518-1913	0	0.0
W-518-1915	42	0.0
W-518-1914	0	0.0
SVB-518-201	0	0.0
SVB-518-204	0	0.0
Total:	<u>136</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>135.8</u>

6. Comments:

12/29/09-Transferred 348 gallons of groundwater for treatment at TF406-NW.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 01-05-2010

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 1 (CRD1)
AREA TF5475-1

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I, certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-20-2009

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 1 (CRD1)
AREA TF5475-1

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2009

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 1 (CRD1)
AREA TF5475-1

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

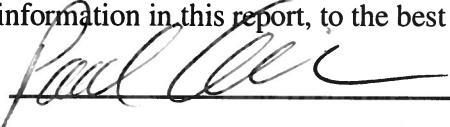
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2010

Self-Monitoring Report
LLNL GAC Treatment Unit 09 (GTU09)
AREA TF5475-2

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 689

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-06-2009

Influent pH: 6.5

Effluent pH: 7.5

Effluent Temperature (°C): 21.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	182,635	4.5
W-1415	0	0.0
Total:	<u>182,635</u>	<u>4.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>182,635</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature  Date: 10-29-2009

Operator Signature: Albert V. N. N. N. Date: **11-30-2009**

Self-Monitoring Report
LLNL GAC Treatment Unit 09 (GTU09)
AREA TF5475-2

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 720

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-03-2009
Influent pH: 6.5
Effluent pH: 7.0
Effluent Temperature (°C): 21.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	194,776	4.5
W-1415	0	0.0
Total:	<u>194,776</u>	<u>4.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>194,776</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

°Operator Signature: *Ant Vinday* Date: 01-12-2010

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 2 (CRD2)
AREA TF5475-3

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1608	0	0.0
W-1605	0	0.0
W-1604	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-20-2009

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 2 (CRD2)
AREA TF5475-3

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1608	0	0.0
W-1605	0	0.0
W-1604	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: 

Date: 12-01-2009

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 2 (CRD2)
AREA TF5475-3

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1608	0	0.0
W-1605	0	0.0
W-1604	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-04-2010**

Self-Monitoring Report

LLNL Vapor Extraction System 08 (VES08)

AREA VTF406-HS

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-217	880,584	22.1	-2.83	68	690
W-514-2007B	390,918	9.6	-2.85	68	690
W-514-2007A	225,611	5.6	-5.42	68	690
Total:	<u>1,497,113</u>	<u>37.2</u>			

4. Comments:

Facility was shutdown 10/8/09 due to failure of OPTO system. EE personnel replaced I/O inputs for data display, rebooted data acquisition panel and facility was restarted 10/8 @ 1400 Hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 11-04-2009

Self-Monitoring Report

LLNL Vapor Extraction System 08 (VES08)

AREA VTF406-HS

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October	<u>30</u>	<u>31</u>																		
November	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>					
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>					

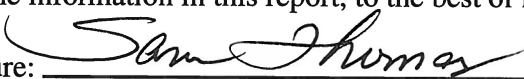
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-217	1,009,710	22.6	-2.81	64	772
W-514-2007B	466,943	9.5	-2.82	64	772
W-514-2007A	292,874	5.5	-5.37	64	772
Total:	<u>1,769,527</u>	<u>37.6</u>			

4. Comments:

Facility was shutdown 11/18 @ 11:15 hrs. for carbon filter changeout, and restarted @ 14:00 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2009

Self-Monitoring Report

LLNL Vapor Extraction System 08 (VES08)

AREA VTF406-HS

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treatment facility operated

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-217	894,533	20.4	-2.51	62.6	726
W-514-2007B	390,029	9.4	-2.94	62.6	726
W-514-2007A	258,349	5.4	-5.19	62.6	726
Total:	<u>1,542,911</u>	<u>35.2</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Horns Date: 01-05-2010

Self-Monitoring Report

LLNL Vapor Extraction System 14 (VES14)

AREA VTF511

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-274	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2204	0	0.0	0	0	0
W-2208B	223,863	5.1	-6.5	60	698
W-1517	0	0.0	0	0	0
W-2207B	222,403	5.1	-4.1	60	698
W-2208A	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
 Total:	 <u>446,266</u>	 <u>10.2</u>			

4. Comments:

Due to communication malfunction with facility OPTO system and TFRT, flow data updates were terminated and remained constant from 10/21 to recording of month end readings.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 11-17-2009

Self-Monitoring Report

LLNL Vapor Extraction System 14 (VES14)

AREA VTF511

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October	30	31																								
November	01	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>											
	<u>16</u>	<u>17</u>	<u>18</u>	19	20	21	22	23	24	25	26	27	28	29	30											

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-274	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2204	0	0.0	0	0	0
W-2208B	123,521	5.4	-5.5	62	389
W-1517	0	0.0	0	0	0
W-2207B	119,571	5.2	-4.5	62	389
W-2208A	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
<hr/>					
Total:	<u>243,092</u>	<u>10.6</u>			

4. Comments:

Facility and well totalizers were zeroed 11/2/09. Month end volumes for SVE wells and monthly hours of operation were adjusted and include values accumulated prior to reset. Facility was secured 11/18/09 when an electrical inspection revealed abnormal voltage and current readings.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2009

Self-Monitoring Report

LLNL Vapor Extraction System 14 (VES14)

AREA VTF511

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treatment facility operated

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-274	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2204	0	0.0	0	0	0
W-2208B	0	0.0	0	0	0
W-1517	0	0.0	0	0	0
W-2207B	0	0.0	0	0	0
W-2208A	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

Facility did not operate during reporting month due to failure of vacuum unit motor.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 01-05-2010

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month October Week: 1 Year 2009

2. Dates (in **bold** and underline) treatment facility operated

September 26 27 28 29 30
October **01** **02**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	36,072	3.6	-15	52	167
W-518-1913	0	0.0	0	0	0
W-518-1915	4,008	0.4	-24	52	167
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>40,080</u>	<u>4.0</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:

Sam Thomas

Date: 10-27-2009

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month October **Week: 2** Year 2009

2. Dates (in **bold** and underline) treatment facility operated


October **03** **04** **05** **06** **07** **08** **09**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	35,312	3.4	-15	72	173
W-518-1913	0	0.0	0	0	0
W-518-1915	4,154	0.4	-24.2	72	173
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>39,466</u>	<u>3.8</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-27-2009

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month October **Week: 3** Year **2009**

2. Dates (in **bold** and underline) treatment facility operated

October **10** **11** **12** **13** **14** **15** **16**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0.	0	0
W-1615	26,534	3.2	-16	60	138
W-518-1913	0	0.0	0	0	0
W-518-1915	2,488	0.3	-24.4	60	138
Total:	<u>29,022</u>	<u>3.5</u>			

4. Comments:

Found facility shutdown 10/14/09, reported facility condition to E.E. personnel for investigation. Shutdown contributed to loss of power to unit due to circuit breaker trip. Facility was restarted 10/14 @ 11:07.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:



Date: **10-27-2009**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month October Week: 4 Year 2009

2. Dates (in **bold** and underline) treatment facility operated

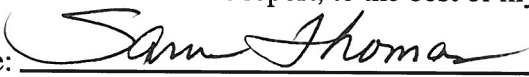
October **17** **18** **19** **20** **21** **22** **23**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	33,026	3.3	-16	52	167
W-518-1913	0	0.0	0	0	0
W-518-1915	4,003	0.4	-24.3	52	167
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>37,029</u>	<u>3.7</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-27-2009

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month October **Week: 5** Year 2009

2. Dates (in **bold** and underline) treatment facility operated

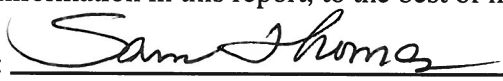
October **24** **25** **26** **27** **28** **29**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	31,710	3.5	-15	68	151
W-518-1913	0	0.0	0	0	0
W-518-1915	3,624	0.4	-24.2	68	151
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>35,334</u>	<u>3.9</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-17-2009

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November Week: 1 Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October **30** **31**

November **01** **02** **03** **04** **05** **06**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	41,514	3.7	-14	66	187
W-518-1913	0	0.0	0	0	187
W-518-1915	5,610	0.5	-23.5	66	187
W-518-1914	0	0.0	0	0	187
SVB-518-201	0	0.0	0	0	187
SVB-518-204	0	0.0	0	0	187
Total:	<u>47,124</u>	<u>4.2</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-17-2009

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November **Week: 2** Year **2009**

2. Dates (in **bold** and underline) treatment facility operated

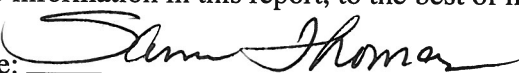
November **07** **08** **09** **10** **11** **12** **13**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	38,406	3.7	-13.8	60	173
W-518-1913	0	0.0	0	0	0
W-518-1915	5,190	0.5	-24	60	173
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>43,596</u>	<u>4.2</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-16-2009

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November Week: 3 Year 2009

2. Dates (in **bold** and underline) treatment facility operated


November **14** **15** **16** **17** **18** **19** **20**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	37,004	3.8	-13.2	50	162
W-518-1913	0	0.0	0	0	0
W-518-1915	4,869	0.5	-23.8	50	162
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>41,873</u>	<u>4.3</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-23-2009

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November Week: **4** Year **2009**

2. Dates (in **bold** and underline) treatment facility operated

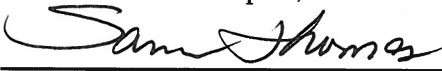
November **21** **22** **23** **24** **25**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	28,010	3.9	-13	44	120
W-518-1913	0	0.0	0	0	0
W-518-1915	3,591	0.5	-24	44	120
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>31,601</u>	<u>4.4</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-02-2009**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December Week: 1 Year 2009

2. Dates (in **bold** and underline) treatment facility operated

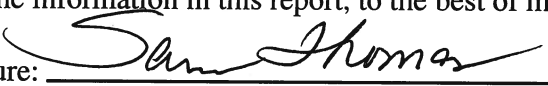
November 26 27 28 29 30
December **01** **02** **03** **04**

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	48,251	3.9	-12	38	206
W-518-1913	0	0.0	0	0	206
W-518-1915	6,186	0.5	-24	38	206
W-518-1914	0	0.0	0	0	206
SVB-518-201	0	0.0	0	0	206
SVB-518-204	0	0.0	0	0	206
Total:	<u>54,437</u>	<u>4.4</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-05-2010

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December **Week: 2** Year 2009

2. Dates (in **bold** and underline) treatment facility operated

December 05 06 07 08 09

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	27,193	3.4	-15	38	133
W-518-1913	0	0.0	0	0	0
W-518-1915	3,199	0.4	-24.2	38	133
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>30,392</u>	<u>3.8</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 12-21-2009

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December Week: **3** Year **2009**

2. Dates (in **bold** and underline) treatment facility operated

December **10** **11** **12** **13** **14** **15** **16** **17**

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	41,990	3.6	-13.5	60	194
W-518-1913	0	0.0	0	0	0
W-518-1915	5,832	0.5	-24	60	194
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>47,822</u>	<u>4.1</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: **01-05-2010**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December Week: **4** Year **2009**

2. Dates (in **bold** and underline) treatment facility operated

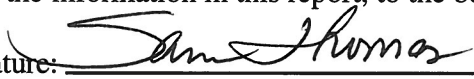
December **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	73,440	4.0	-12.5	50	306
W-518-1913	0	0.0	0	0	0
W-518-1915	9,180	0.5	-23.8	50	306
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>82,620</u>	<u>4.5</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-05-2010**

Self-Monitoring Report

LLNL Vapor Extraction System 01 (VES01)

AREA VTF5475

1. Reporting Period: Business Month October Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-507	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-1605	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
<hr/>					
Total:	<u>0</u>	<u>0.0</u>			

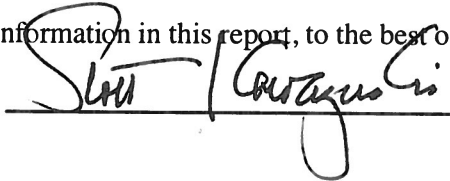
4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY 2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-20-2009

Self-Monitoring Report

LLNL Vapor Extraction System 01 (VES01)

AREA VTF5475

1. Reporting Period: Business Month November Year 2009

2. Dates (in **bold** and underline) treatment facility operated

October	30	31																	
November	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15				
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-507	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-1605	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
<hr/>					
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY 2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: _____

Scott Kawaguchi

Date: 11-30-2009

Self-Monitoring Report

LLNL Vapor Extraction System 01 (VES01)

AREA VTF5475

1. Reporting Period: Business Month December Year 2009

2. Dates (in **bold** and underline) treatment facility operated

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-507	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-1605	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY 2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-29-2009

Attachment C

Lake Haussmann

Attachment C

Lake Haussmann Fourth Quarter 2009 Monitoring Program Summary

This attachment summarizes the fourth quarter 2009 LLNL Environmental Protection Department discharge data for Lake Haussmann. Lake Haussmann is an artificial water body that has a 37 acre-ft capacity. It is located in the central portion of the Livermore Site (Fig. C-1) and receives storm water runoff and treated ground water discharges.

Samples are collected from water discharged from Lake Haussmann and analyzed as outlined in Jackson (2002). The discharge samples are used to determine compliance with discharge limits in the *Record of Decision* (DOE, 1992), and the subsequent *Explanation of Significant Differences for Metals Discharge Limits* (Berg et al., 1997).

Dry season (June, July, August, September) discharges are sampled at each manual release or monthly during periods of continual release. Wet season (October through May) discharge samples are collected at the first release of the wet season and one other discharge in conjunction with a storm water monitoring event. Analytic results of discharge samples collected at location CDBX are compared with the LLNL Arroyo Las Positas outfall sample results collected at location WPDC (Fig. C-1). The results for samples collected at locations CDBX and WPDC are presented in Table C-1. All PCBs were below detection limits. No metals or VOCs exceed discharge limits. Acute and chronic bioassay tests showed no toxicity. The pH values at the CDBX location exceeded the desired range of 6.5 to 8.5. The pH has averaged 8.8 since 1998 at the CDBX sampling location and is typically elevated during summer due to increased photosynthesis.

Discharge from Lake Haussmann remained continuous during the fourth quarter, with one exception. Invasive species mitigation in Arroyo Las Positas requires the temporary cessation of upstream discharges. No discharge from Lake Haussmann occurred from October 30, 2009 to November 9, 2009 to support this mitigation effort. The Lake Haussmann upper weir gate was otherwise maintained at the lowered position during the entire fourth quarter, so that releases occurred continuously to minimize changes in surface water level and allow for a more natural ecosystem.

References

- U.S. Department of Energy, *Record of Decision for the Lawrence Livermore National Laboratory, Livermore Site*, Lawrence Livermore National Laboratory, Livermore, CA, UCRL-AR-109105, (1992).
- Berg, L.L., E.N. Folsom, M.D. Dresen, R.W. Bainer, and A.L. Lamarre, Eds., *Explanation of Significant Differences for Metals Discharge Limits at the Lawrence Livermore National Laboratory, Livermore Site*, Lawrence Livermore National Laboratory, Livermore, CA, UCRL-AR-125927 (1997).
- Jackson, C.S., *Drainage Retention Basin Monitoring Plan Change*, Letter to Ms. Naomi Feger, San Francisco Bay RWQCB, Lawrence Livermore National Laboratory, Livermore, CA, WGMG02:175:CSJ:RW:kh, (December 6, 2002).

Table C-1 LLNL Lake Haussman release monitoring data for points CDBX and WPDC, October through December 2009.

			CDBX 10/12	CDBX 10/13	WPDC 10/12	WPDC 10/13	Discharge Limits 1-Apr through 30-Nov	Discharge Limits 1-Dec through 31-Mar
Physical								
pH	Units	EPA-150.1	8.98	8.76	a	a	not <6.5 or >8.5	not <6.5 or >8.5
Total Dissolved Solids (TDS)	mg/L	EPA-160.1	840.	750	6.20	7.23	na	na
Total Suspended Solids (TSS)	mg/L	EPA-160.2	2.0	<1.1	5.1	140	na	na
Polychlorinated biphenyls								
PCB 1016	ug/L	E8082A	< 0.5	< 0.5	b	b	na	na
PCB 1221	ug/L	E8082A	< 0.5	< 0.5	b	b	na	na
PCB 1232	ug/L	E8082A	< 0.5	< 0.5	b	b	na	na
PCB 1242	ug/L	E8082A	< 0.5	< 0.5	b	b	na	na
PCB 1248	ug/L	E8082A	< 0.5	< 0.5	b	b	na	na
PCB 1254	ug/L	E8082A	< 0.5	< 0.5	b	b	na	na
PCB 1260	ug/L	E8082A	< 0.5	< 0.5	b	b	na	na
Metals								
Aluminum	mg/L	EPA-200.7	<0.05	<0.05	a	2.5	na	na
Antimony	mg/L	EPA-200.8	<0.005	<0.005	0.17	<0.005	0.006	na
Arsenic	mg/L	EPA-200.8	<0.002	<0.002	<0.002	<0.002	0.05	0.01
Barium	mg/L	EPA-200.7	0.13	0.11	0.12	0.087	na	na
Beryllium	mg/L	EPA-210.2	<0.004	<0.0020	<0.002	<0.002	0.004	na
Boron	mg/L	EPA-200.7	2.6	2.1	1.5	0.28	na	na
Cadmium	mg/L	EPA-200.8	<0.0005	<0.0005	<0.0005	<0.0005	0.005	0.0022
Chromium	mg/L	EPA-200.8	0.0046	0.0048	0.007	0.021	0.05	na
Cobalt	mg/L	EPA-200.7	<0.05	<0.05	<0.05	<0.05	na	na
Copper	mg/L	EPA-200.8	<0.001	<0.001	0.0014	0.022	1.3	0.0236
Hexavalent Chromium	mg/L	EPA-218.6	0.0047	0.0043	0.007	<0.0020	na	0.022
Iron	mg/L	EPA-200.7	<0.1	0.25	3.6	na	na	na
Lead	mg/L	EPA-200.8	<0.005	<0.005	<0.005	0.0072	0.015	0.0064
Manganese	mg/L	EPA-200.8	<0.03	<0.03	<0.03	0.19	0.5	0.5
Mercury	mg/L	EPA-245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.002	0.002
Molybdenum	mg/L	EPA-200.8	<0.025	<0.025	<0.025	<0.025	0.05	na
Nickel	mg/L	EPA-200.8	<0.002	0.0022	<0.002	0.017	0.1	0.32
Selenium	mg/L	EPA-200.8	<0.002	<0.002	<0.002	<0.002	0.05	0.01
Silver	mg/L	EPA-200.8	<0.001	<0.001	<0.001	<0.001	0.1	0.0082
Thallium	mg/L	EPA-200.8	<0.001	<0.001	<0.001	<0.001	0.002	na
Vanadium	mg/L	EPA-200.7	<0.02	<0.02	<0.02	<0.02	na	na
Zinc	mg/L	EPA-200.7	<0.02	0.027	<0.02	0.23	na	0.22
Organics^{c,d}								
1,1-Dichloroethane	ug/L	EPA-601	<0.5	b	a	b	5	5
1,1-Dichloroethene	ug/L	EPA-601	<0.5	b	<0.5	b	5	5
1,2-Dichloroethane	ug/L	EPA-601	<0.5	b	<0.5	b	5	5
1,2-Dichloroethene (total)	ug/L	EPA-601	<1.0	b	<1.0	b	na	na
Bromodichloromethane	ug/L	EPA-601	<0.5	b	<0.5	b	5 ^e	5 ^e
Bromoform	ug/L	EPA-601	<0.5	b	<0.5	b	5 ^e	5 ^e
Carbon tetrachloride	ug/L	EPA-601	<0.5	b	<0.5	b	5	5
Chloroform	ug/L	EPA-601	<0.5	b	<0.5	b	5 ^e	5 ^e
cis-1,2-Dichloroethene	ug/L	EPA-601	<0.5	b	<0.5	b	5	5
Tetrachloroethene	ug/L	EPA-601	<0.5	b	<0.5	b	5	5
trans-1,2-Dichloroethene	ug/L	EPA-601	<0.5	b	<0.5	b	5	5
Trichloroethene	ug/L	EPA-601	<0.5	b	<0.5	b	5	5
Vinyl chloride	ug/L	EPA-601	<0.5	b	<0.5	b	2	2
Radiological								
Alpha	pCi/L	E900	a	b	b	b	na	na
Beta	pCi/L	E900	3.23	b	8.91	b	na	na
Tritium	pCi/L	E906	<3.00	b	5.66	b	na	na
			132.	b	161.	b	20,000	20,000
Herbicides								
Bromicil	ug/L	EPA-525-2	a	b	<0.5	b	na	na
Diuron	ug/L	EPA-632	<1.0	b	<1.0	b	na	na
Glyphosate	ug/L	EPA-547	f	<5.0	<5.0	<5.0	na	na
Acute Toxicity								
Aq. Bioassay, Survival	Percent	Title 22	a	b	a	b	na	na
Chronic Toxicity								
Fathead Minnow Survival LOEC	Percent	E1000	90	b	b	b	na	na
Fathead Minnow Survival NOEC	Percent	E1000	100	b	b	b	na	na
Fathead Minnow Growth LOEC	Percent	E1000	100	b	b	b	na	na
Fathead Minnow Growth NOEC	Percent	E1000	100	b	b	b	na	na
Water Flea Survival LOEC	Percent	E1002	100	b	b	b	na	na
Water Flea Survival NOEC	Percent	E1002	100	b	b	b	na	na
Water Flea Reproduction LOEC	Percent	E1002	100	b	b	b	na	na
Water Flea Reproduction NOEC	Percent	E1002	100	b	b	b	na	na
Algae Growth LOEC	Percent	E1003	100	b	b	b	na	na
Algae Growth NOEC	Percent	E1003	100	b	b	b	na	na

a) All analysis results for these analytes are below reporting limits.

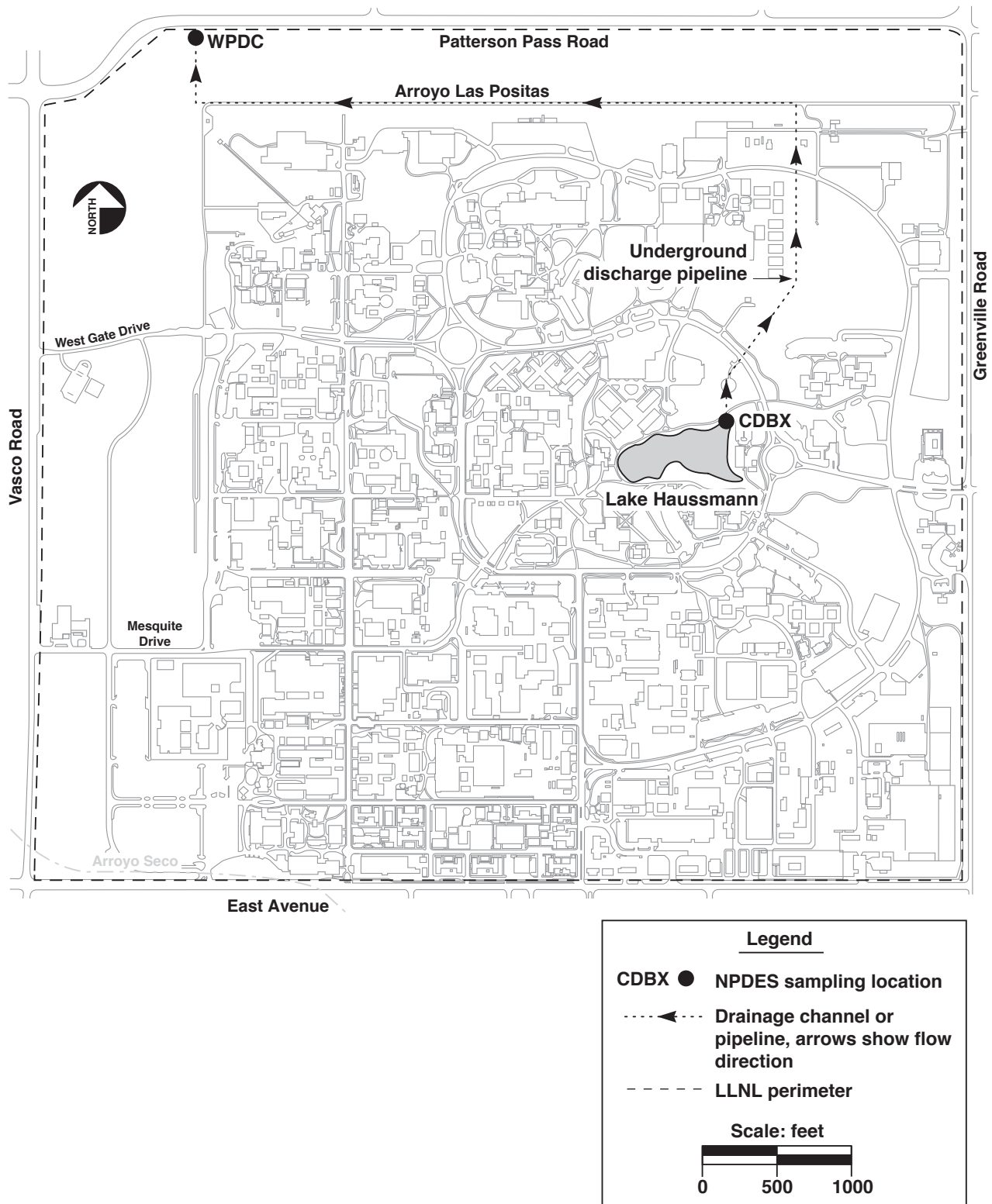
b) Sampling for these analytes not required at this location.

c) The reporting limit is from 0.5 µg/L to 10 µg/L for various VOCs.

d) VOCs reported are the Constituents of Concern for CDBX and WPDC sampling locations.

e) The reporting limits for THM (chloroform, bromoform, chlorodibromomethane, bromodichloromethane) is 5 ug/L.

f) Hold times exceeded by analytical laboratory for this sample; no analytical data available for this sample as a result.



ERD-S3R-08-0041

Figure C-1. Location of Lake Haussmann showing discharge sampling locations.

Attachment D

Figures

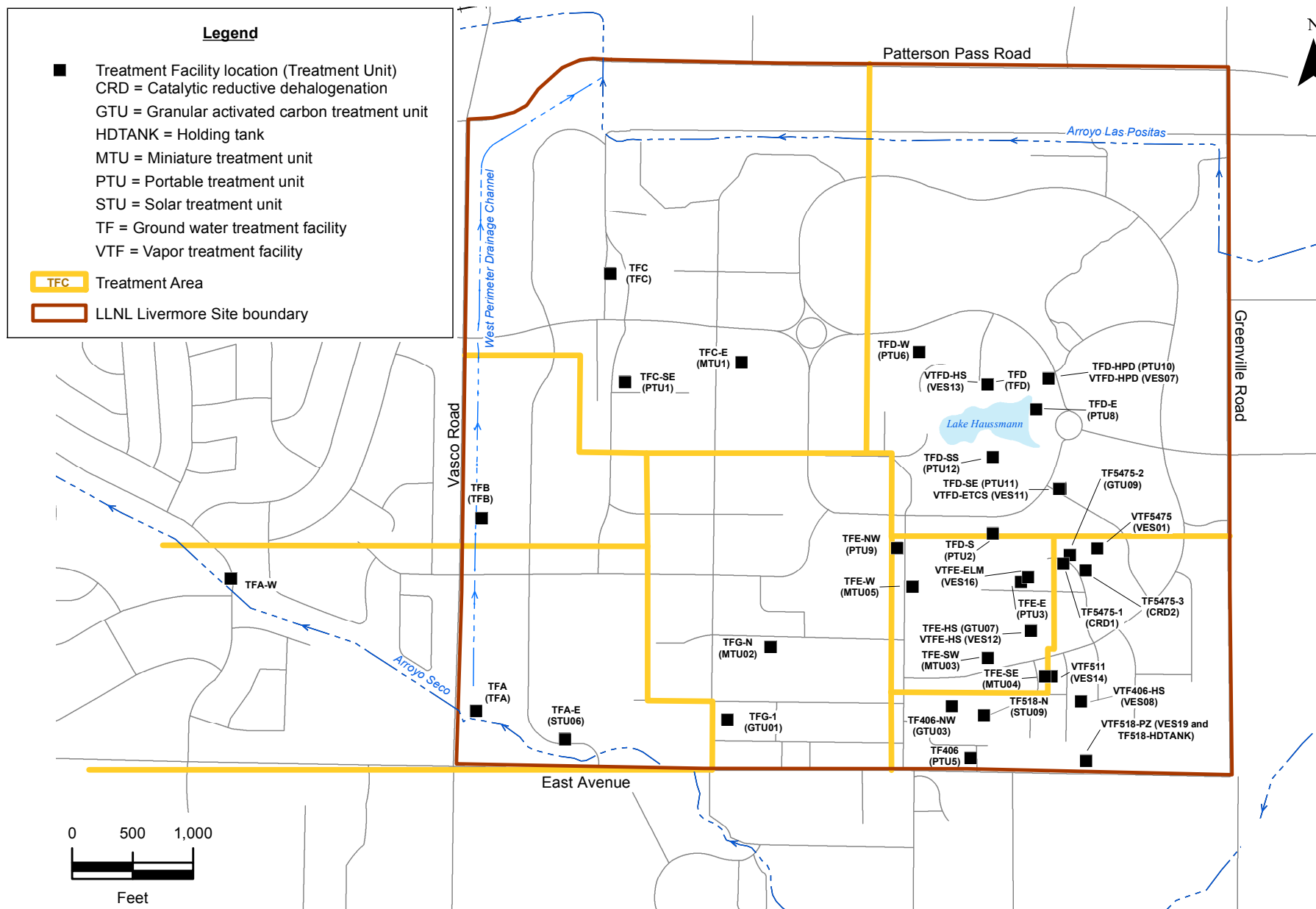


Figure 1. Livermore Site treatment areas and treatment facility locations.

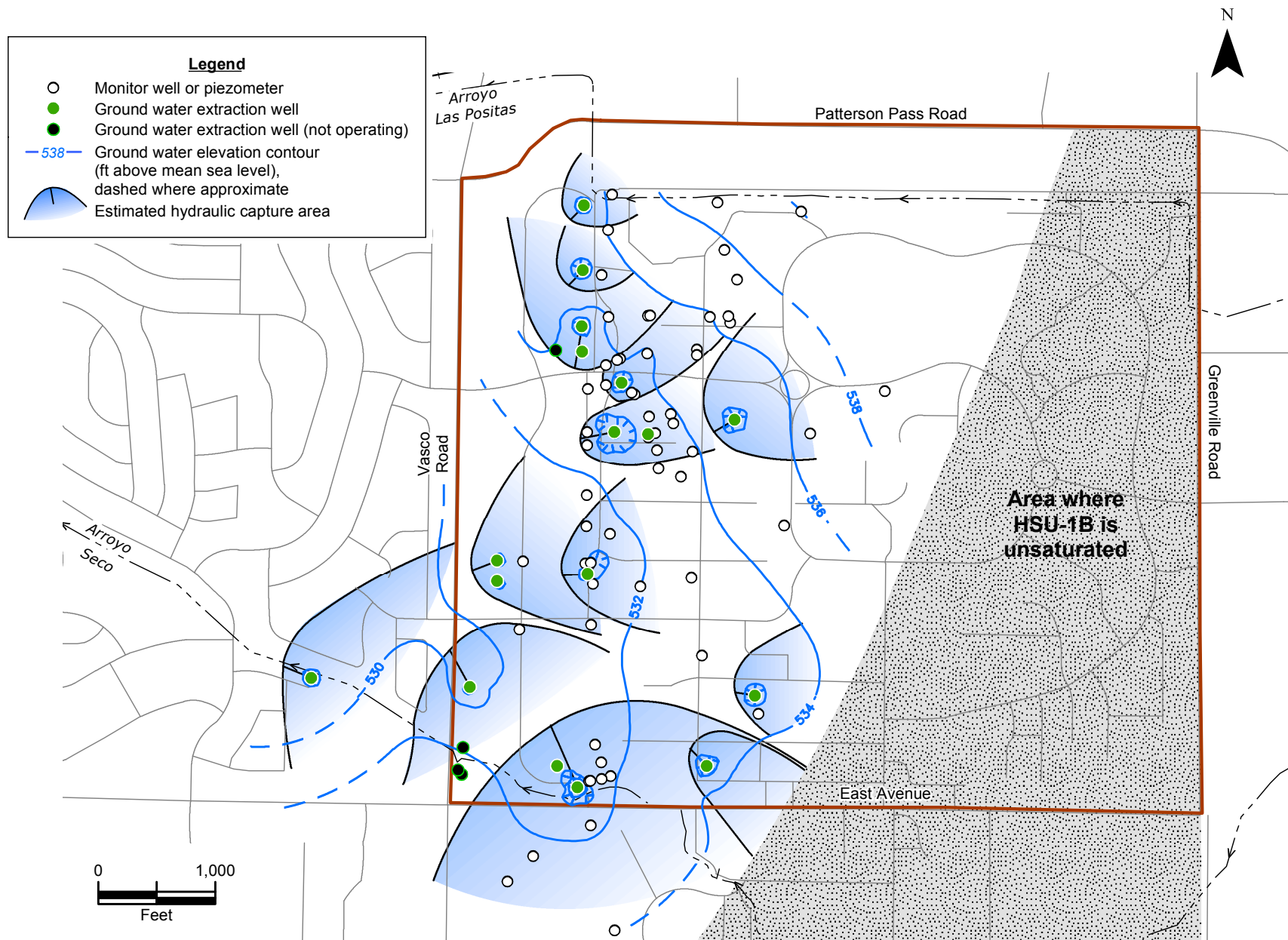


Figure 2. Ground water elevation contour map based on 83 wells completed within HSU-1B showing estimated hydraulic capture areas, LLNL and vicinity, October 2009.

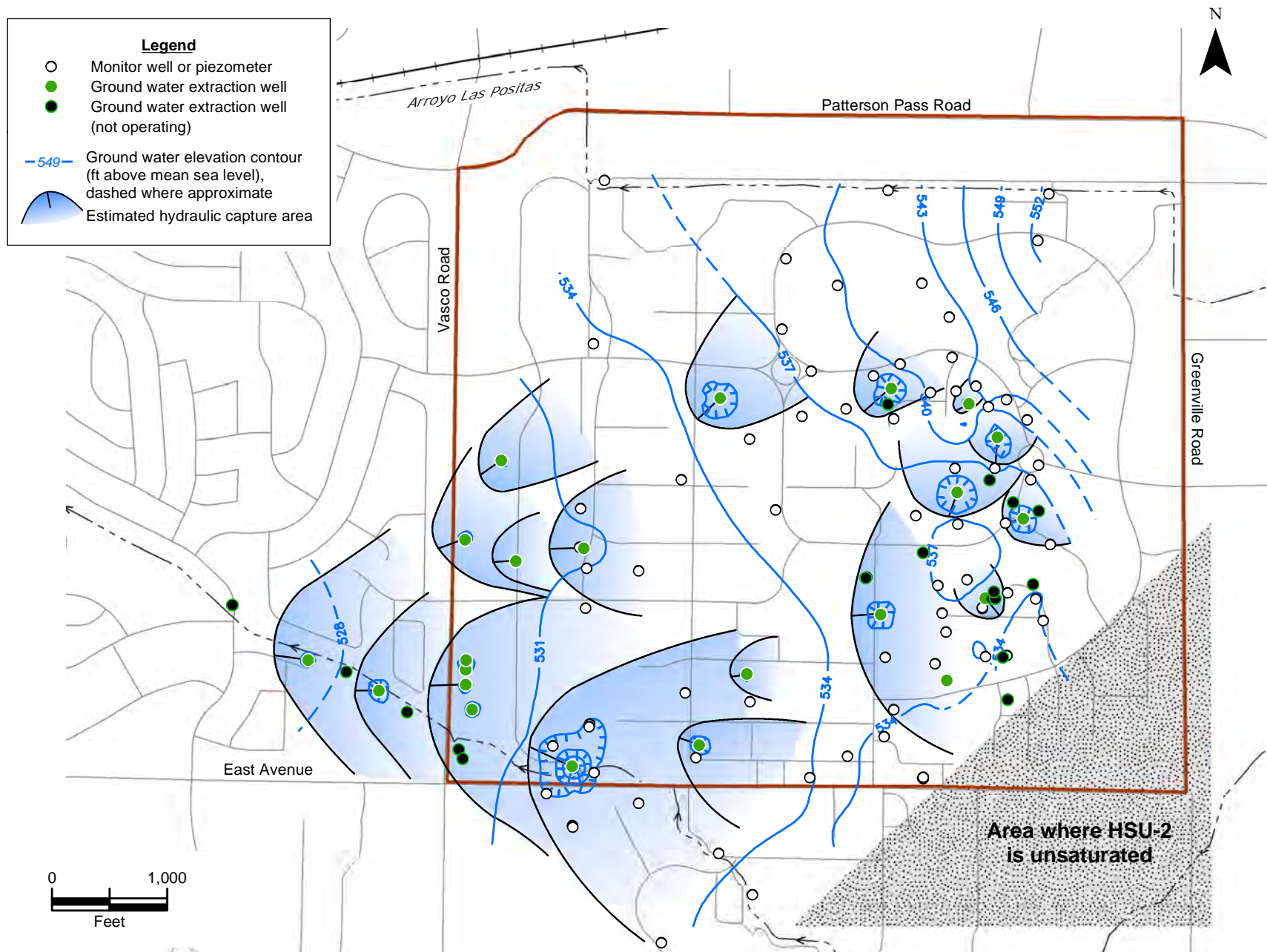


Figure 3. Ground water elevation contour map based on 115 wells completed within HSU-2 showing estimated hydraulic capture areas, LLNL and vicinity, October 2009.

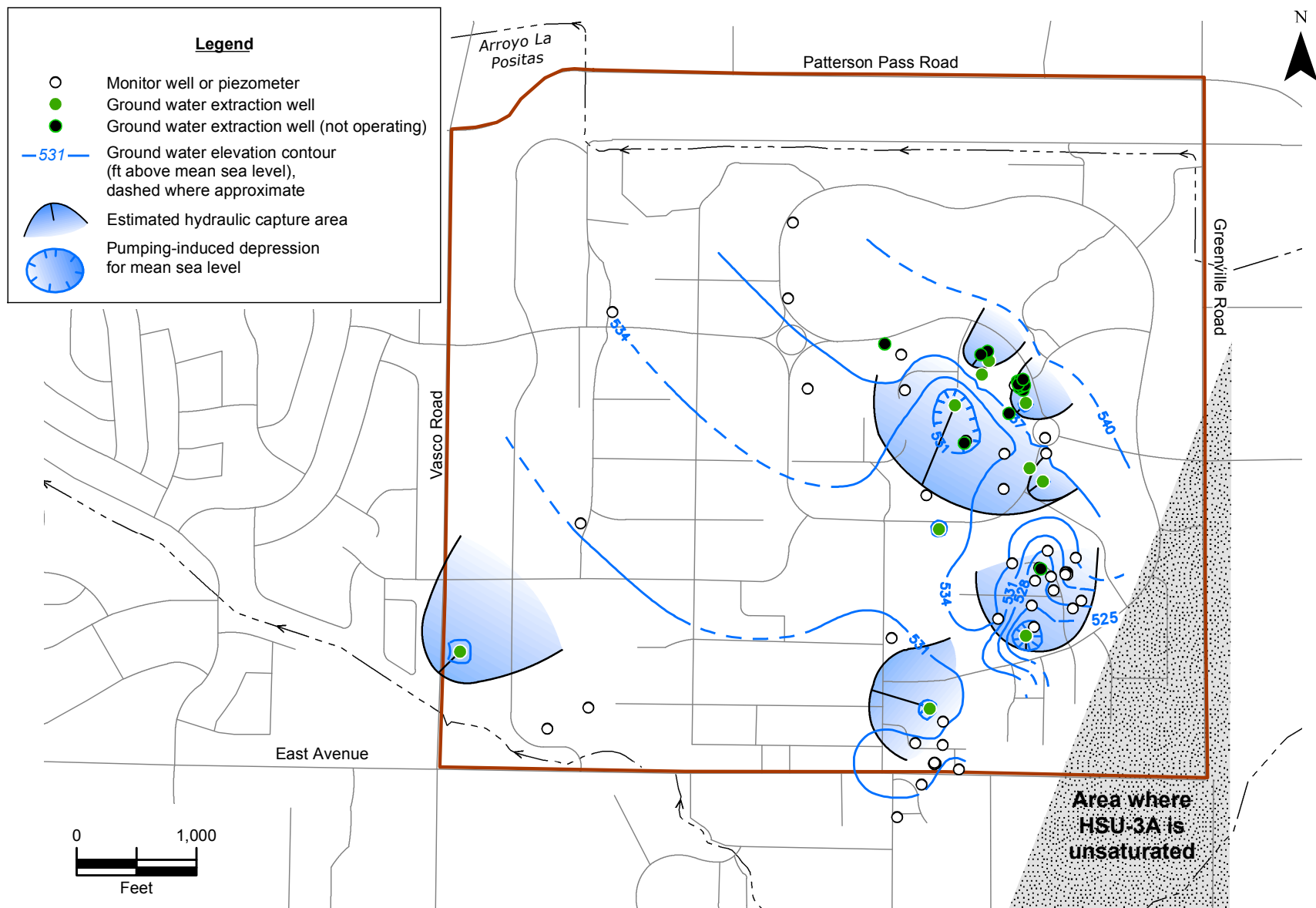


Figure 4. Ground water elevation contour map based on 70 wells completed within HSU-3A showing estimated hydraulic capture areas, LLNL and vicinity, October 2009.

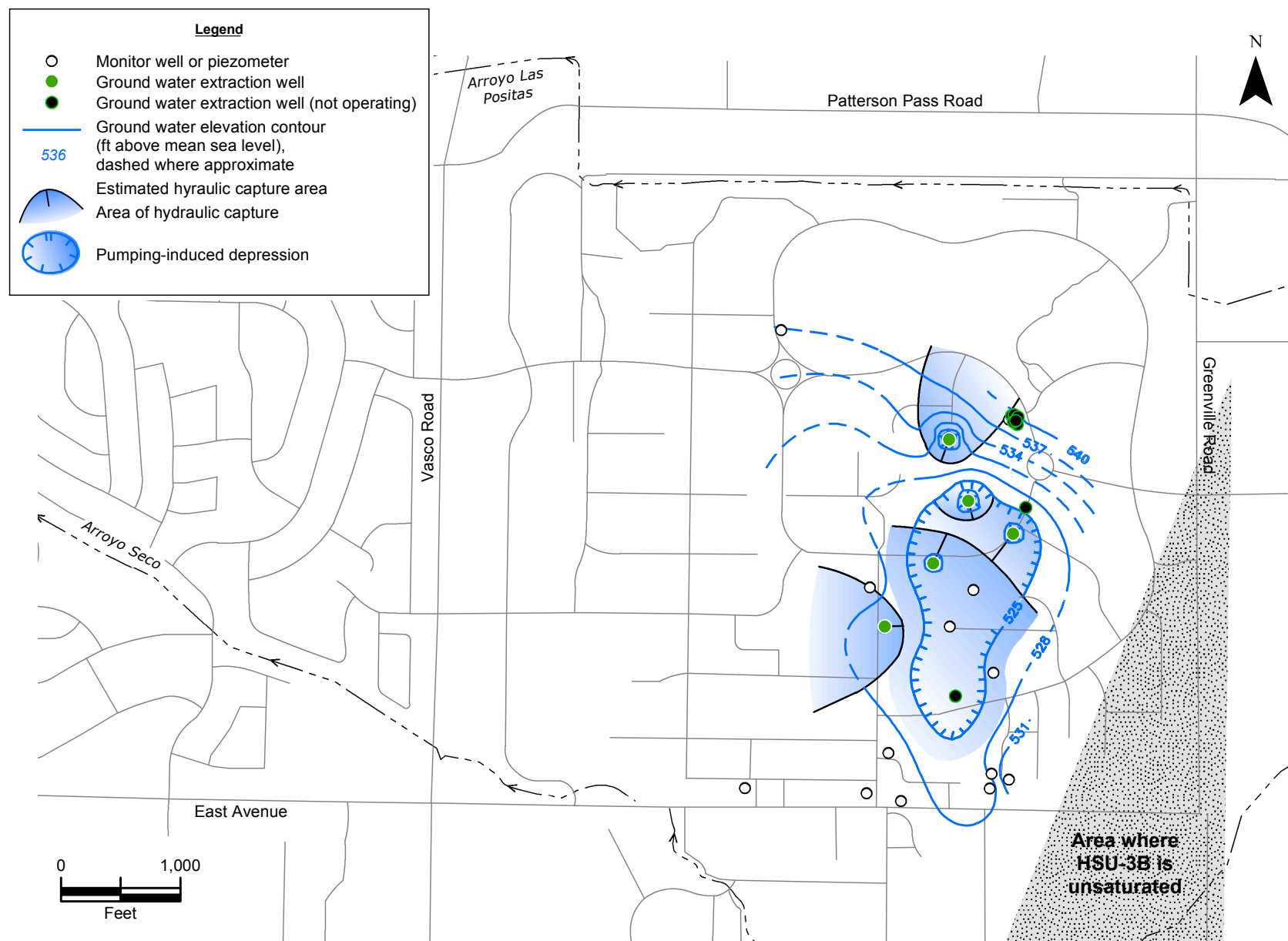


Figure 5. Ground water elevation contour map based on 27 wells completed within HSU-3B showing estimated hydraulic capture areas, LLNL and vicinity, October 2009.

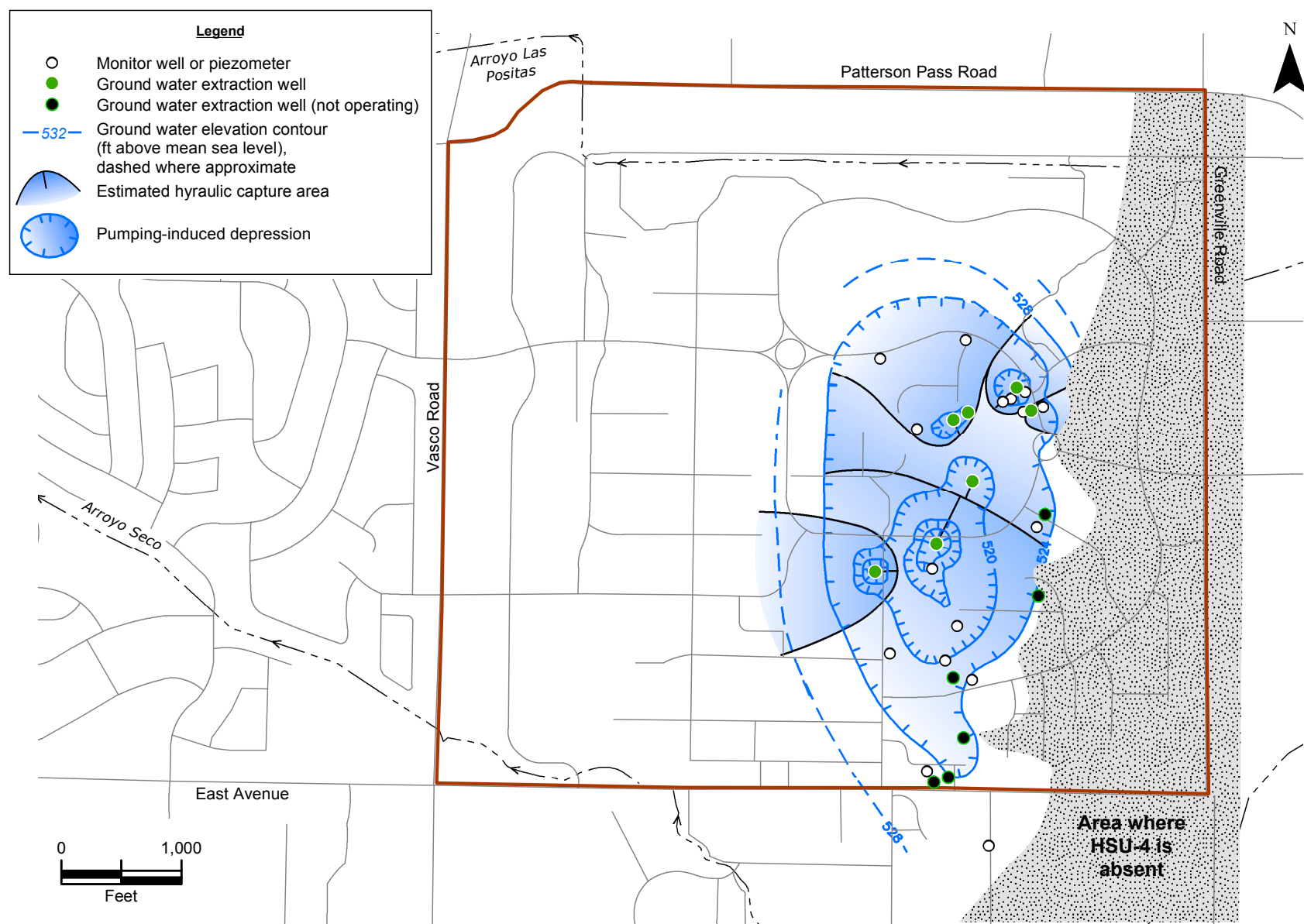


Figure 6. Ground water elevation contour map based on 29 wells completed within HSU-4 showing estimated hydraulic capture areas, LLNL and vicinity, October 2009.

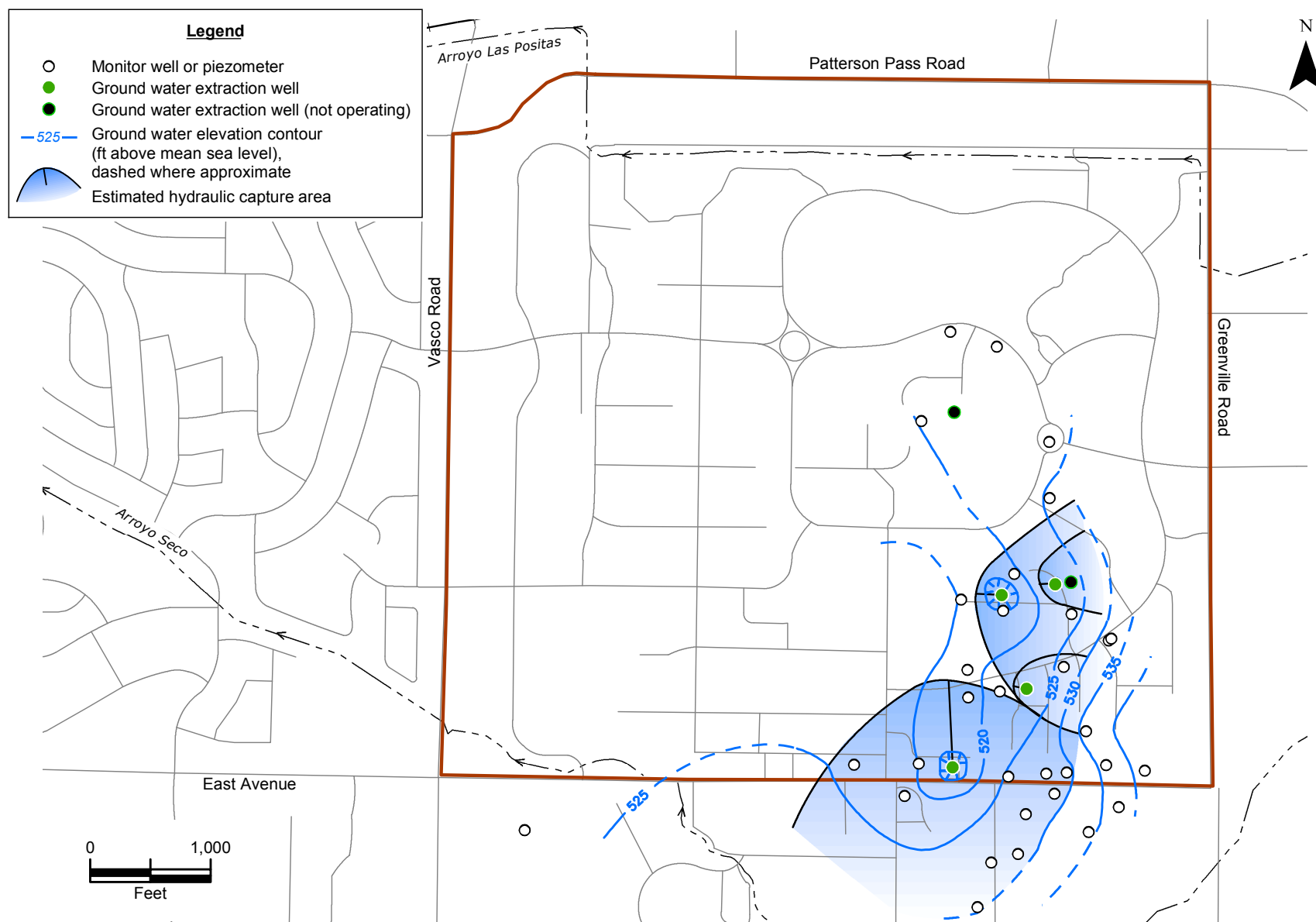


Figure 7. Ground water elevation contour map based on 38 wells completed within HSU-5 showing estimated hydraulic capture areas, LLNL and vicinity, October 2009.